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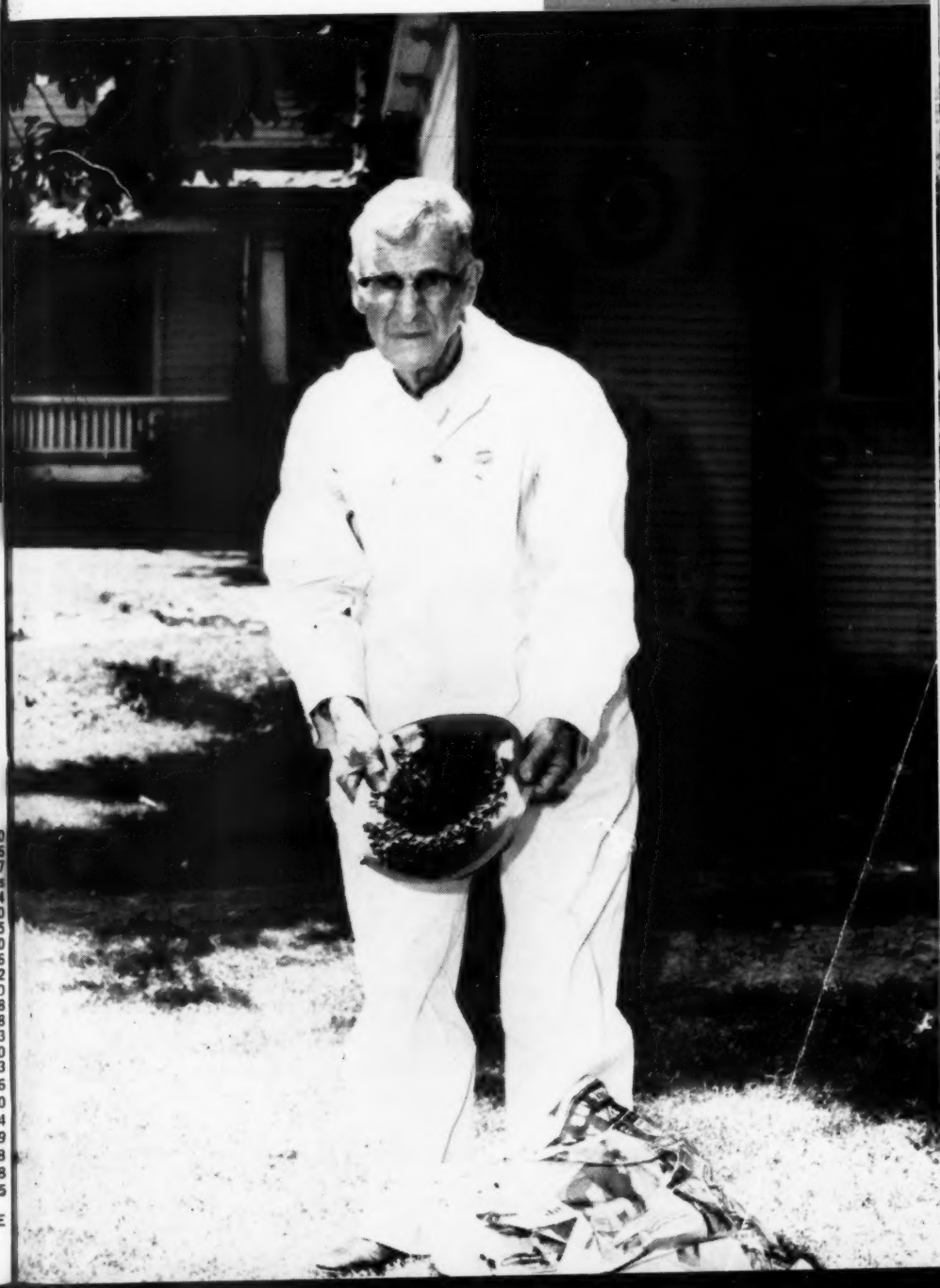
Gleanings in BEE CULTURE

August 1961



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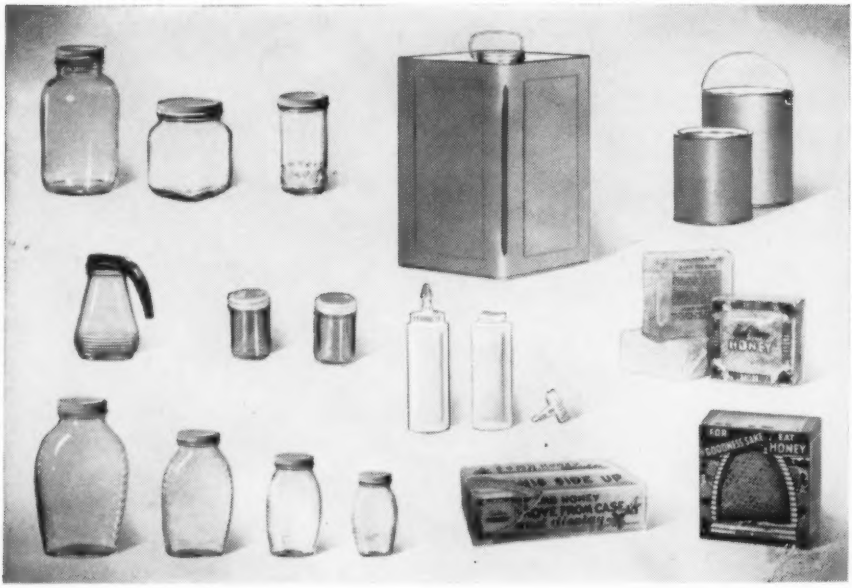

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Gleanings in Bee Culture

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88 Years Continuous Publication by the Same Organization

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COVER STORY — Jack Deyell is getting ready to perform a bee demonstration during Medina's "Sweetest Week", July 3-8. He shakes two combs of bees into his hat, then puts the hat on his head. The late E. R. Root performed this "stunt" many times when he traveled over the country with the Chautauqua Show years ago. That is how Jack caught onto how it was done. See page 478 for the picture showing him wearing the hat full of bees.

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Gleanings' Mail Box

JACK HAPP

Dear Editor:

You mentioned in Gleanings that you would like to know if anyone had tried the Argentine Rape seed.

I purchased five pounds from the Company in Saskatchewan, Canada.

I planted a patch of land about 50 by 60 feet on about May 20th and by June 25th it was about a foot or more high; by this date it is even higher, some of it, and is one mass of yellow bell-shaped flowers. I have 10 colonies of bees and they are about two city blocks from the rape. Today I looked it over and was pleasantly surprised to see hundreds of bees working on the flowers.

Hope this will be of some good to any that care to try it.—C.L.V., Conn.

Dear Editor:

What's wrong with beekeepers?

They are always griping because honey is not a best seller in the super markets, and most of them will agree that this is because the American housewife has not been introduced to the deliciousness of honey, because of the lack of proper advertisement.

Yet, when beekeepers are asked to support the CHECK-OFF PLAN, they are always quick to turn a deaf ear and a closed pocketbook.

Of course housewives don't buy honey....simply because it isn't brought before them on television and in magazines and newspapers.

Let's stop trying to get women to use honey in cooking and concentrate on putting over to them how really delectable and nutritious honey is in its natural form....right off the shelf.

We can do this only by joining together and backing National Advertisement for our product.....through the CHECK-OFF PLAN or some other similar method.

Yours in the interest of beekeeping and its by-products. — H. Y.

Dear Editor:

Thanks for printing Dr. Maxwell's "The Holy Bible" — a real honey testimonial.

Mr. A. I. Root would have been the first to endorse such a stirring article. —Mrs. B. G., Florida.

Dear Editor:

The item on page 398 in July Gleanings should be put in pamphlet form and put on all honey jars sold. A real honey sales helper. — C. S., Ohio.

Dear Editor:

This year marks my second subscription to Gleanings. In my opinion it is an extremely valuable magazine for all beekeepers but I feel it could be even better.

A gentleman in the March issue has been greatly criticized for his view on the "Hollywood Society Angle". I do not agree with that completely but let us not discard the idea of keeping with Gleanings' main function which is an informative one — a practical aid to the beekeeper. Placing myself in your place, Mr. Editor, please help keep society news etc. as extra curriculur and at a minimum. — J. R. C., Pa.

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Monthly HONEY Report

WALTER BARTH, Field Editor, San Antonio, Texas

IT IS STILL too early to make any predictions on the honey crop or price tendencies, other than stating that honey prices have remained much the same over the last 30 days. Here is the retail price picture based on reports received here from all over the country:

Retail Honey Prices

Container	Price
½ lb. Jar	$ .21 to $ .25
1 lb. Jar	.37 to .45
2 lb. Jar	.79 to .83
5 lb. Round	1.59 to 1.73
5 lb. Square	1.65 to 1.73

In examining the figures quoted above, a reader's first question would be regarding the great variation or range in the prices. First, let me point out that "House Brands" or "Chain Labels" were always on the bottom of the price range. In examining this situation locally, I found that the quality of the honey was the same as offered by the national brands. My inquiries here clearly showed that whenever the "House Brands" offered good honey at low prices they were buying from small beekeeper-packers who were apparently interested in selling the bulk of their honey at any price.

Before proceeding further, the classification of "House Brands" or "Chain Labels" should be defined. We are referring to containers carrying a chain store label with honey packed for them by a honey packer or producer.

Prior to writing this report I visited the honey department in a large chain super market. There on the shelves were 4½ pound pails of excellent honey (in flavor and color) selling for 99 cents per can. This is not a low price, as readers report prices of 79 cents for similar size containers appearing in food stores in the Detroit marketing area. And in this instance the honey appeared under well known labels. This was obviously a price war. Here in the San Antonio area honey prices are being held up by the large packers.

Prices appear to be in an unsettled condition in the Denver area which comprises over half of the Colorado population. There we find four pound jars of honey selling for 69 cents per jar. Ouch! What will the producer get?

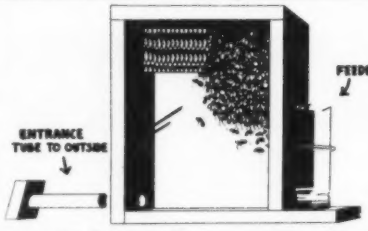
Specialty honey items will sometimes bring higher prices. Here is this picture as summarized by Gleanings reporters:

Container	Price
8 oz. Orange Honey in fish bowl jar	33¢
12 oz. Honey in plastic dispenser	57¢
10 oz. Honey Spread in plastic container	33¢
12 oz. Honey Spread in glass container	39¢
Honey Syrup (12 oz.)	27¢

HONEGAR, the health food sensation of six months ago has all but disappeared from grocers' shelves. None can be found locally anymore. Since writing about HONEGAR in this column requests for more information have come from far ports of the world. We have sent samples of HONEGAR to Germany, India, Australia, South Africa, and other places.

Colonies appear to be in fair condition throughout the country but considerable feeding is reported in some areas where bad weather prevents bees from working clover. Apparently swarms approached the flow fairly

(Continued on page 509)



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Merrell Barfield (extreme left) shows his class of boys some of the techniques in beekeeping. Each of the boys has developed an intense interest in beekeeping through raising and finding the answers to many questions regarding this vocation.

Beekeeping in the Classroom

Youth to an industry is as important as brood is to a beehive, one cannot survive without the other.

A. B. KENNERLY
College Station, Texas

ONE OR TWO less than a dozen boys slid out of automobiles at the headquarters of T. E. Kane, beekeeper near Hallettsville, Texas. The boys with all of the excitement and thrill of a new adventure were attending the meeting of the Gulf Coast Beekeepers' Association.

"Who are these boys? They seem so interested in beekeeping," someone asked.

The boys could not conceal their interest and each had a reason: from two to ten colonies at home in nearby Wharton. Enrolled in vocational agriculture with beekeeping projects, they study under instructors Merrell Barfield and Freddie George. Barfield has studied beekeeping in his early days at Texas A & M College.

To carry out their projects to better advantage, the boys have organized the Wharton Bee Association, and each of them owns a $5 share of stock in the association.

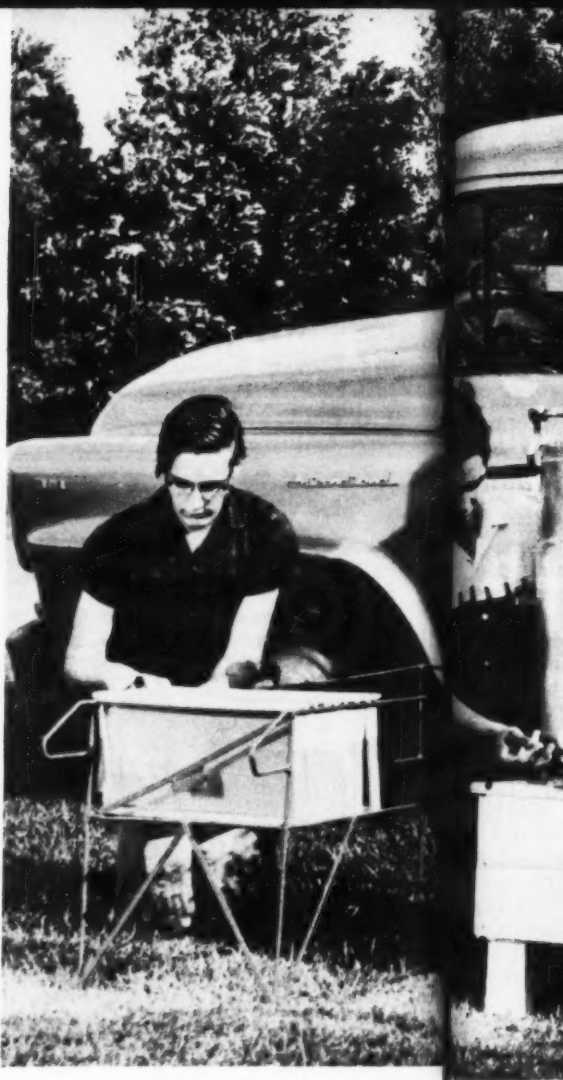
"We are interested in learning all about bees," explains Bobby Smothers who is president of the association. And listening to the discussion about bees among the boys, one is not certain but that they are veteran beekeepers at a meeting. Talk runs along the same lines.

Beekeeping as a project in the Wharton school had its beginning when Merrell Barfield encouraged a few of his boys to undertake beekeeping in January 1960. They were interested from the start and by May of that year had purchased 25 colonies of bees from a commercial operator. These colonies were distributed among 12 boys who made up the organization.

The Wharton Chapter of Future Farmers of America owns half of the outstanding shares; the boys own the other half. However, each boy can purchase only one share and has only one vote in the organization. When graduating, or leaving the organization, the boy must sell his share to another member or to the Chapter. If a boy does not sell his stock within 12 months after graduating, he loses the stock and it reverts back to the Chapter. No boy can take a part in the Association without owning stock.

With these arrangements agreed to, and printed on the stock certificates, Barfield was ready to lead his boys further into the beekeeping projects. The association bought a couple of veils and smokers, and a small honey extractor.

A starting unit consists of two colonies, but like most beekeepers, the boys soon have an urge to increase their colonies. President Bobby Smothers has 10 colonies. Secretary Leland Buenger has seven.



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The vocational agriculture boys are proud of the equipment which the association owns. Note the iron frame to the extreme left which the boys built to hold frames of honey when taken from the hives for extraction. Handles at each end are to lift the iron frame and its load of honey to place in the truck.

One of the main problems, aside from web worms, is finding good honey locations. If this is a problem to veteran beekeepers, it is likewise just as much of a problem to the youngsters who spend much time discussing good sources of nectar. The main honey flow around Wharton comes from clover, alfalfa and cotton. Some of the boys make arrangements with relatives and friends for locations on rice levees or other places on the farms. Bobby Smothers is not sure about the best locations. He believes some of the colonies in town make more honey than those in the country.

Barfield has greater ideas in mind for the boys. "We may encourage the boys to increase colony numbers to 15 or 20 each and move them north as the clover crops begin to bear nectar," he observes. "There is some movement of a migrant nature now, but it is confined to the country."

One disadvantage in working with the boys is that they graduate from school and must resign from the Association — but they don't resign from beekeeping. There is a good possibility

that some of them will retain their interest and their hives.

By the end of the 1961 school year, the boys in the Association had increased their colonies to 48, and were still increasing as they would locate new swarms. "We're not satisfied with the quality of our bees, hiving swarms as we do," comments Darrell Sagala who is slated for the Association presidency next year. "We're planning to raise some queens, and gain experience in that phase of beekeeping."

To assist the boys in learning the art of queen rearing, Barfield arranged for a local commercial queen breeder to put on demonstrations. "We will select one of the boys who has the quality of bees from which we would like to grow our queens and let him have charge of this phase of queen rearing," Barfield explains.

With one honey marketing year behind them, the boys were getting ready for another at the close of school. They sold their honey at retail prices to friends last year, all they could produce and they could have sold more. One of the boys whose father operates a service station put his honey on display at the station. All of it was sold in a few days, the honey from one of his colonies bringing $8. They packed their honey in one-half pint, one pint and one gallon jars.

The 1961 crop was marketed under their own printed label. At extracting time, they were discussing the possibility of pooling their honey in the association and selling all of it through two merchants in Wharton.

In addition to the practical experience gained from periodic inspections of their colonies, the boys study beekeeping under Barfield and George in their class rooms. Texts consist of manuals and bulletins on the subject.

Association president Bobby Smothers helped the boys by inspecting their colonies with them on some occasions. They watched for disease, they checked on the queen to determine her laying condition, and they decided many management changes that should be made in the colonies.

There's no slump in beekeeping activities among the boys when school is out. They continue their inspections

(Continued on page 507)

The boys put on demonstrations and explain the secrets of beekeeping to various audiences.

The Beekeepers' Association

What is your beekeepers' association like? Is it a social gathering? A place to exchange beekeeping information? A force for good in your beekeeping business? Or is it a show place for bickering individualism?

ROBERT M. MEAD
White River Junction, Vt.

WITH A BEEKEEPERS' association in nearly every state and with many states having several local associations it is entirely possible for your association to be almost anything. The basic purpose is clear — beekeepers should have associations — and basically, they should work for the common good of the beekeeper and the industry — but unfortunately the results are often less than perfect.

Beekeepers are people — people are human. Human faults are such that association officials with the best possible intentions are sometimes simply conforming to the wishes of their membership. And do the dissatisfied people indicate their likes and dislikes? Often they do not. They simply sit and simmer in some degree of outrage through one meeting after another.

Perhaps we should consider some of the legitimate aims of a beekeepers' association.

If beekeeping in the area is mostly of the hobby variety then the social type of beekeepers' association is often all that is needed and this type of association is often highly successful. Meetings are held as often as once a month —there are suppers or lunches, a speaker on some special area of beekeeping, and of course, an endless chance to exchange ideas on management and the gadgets some hobbyists feel essential. The social type of association is perhaps the easiest to run. In at least one sense, the members are interested in bees but not so highly competitive, and thus not so sensitive, as those who depend solely on the beekeeping dollar.

In associations backed mainly by commercial beekeepers there is the greatest chance to do good, and at the same time, at least on occasion, the highest degree of personal feeling. The commercial man is competitive. He competes for locations, for honey outlets, for pollination contracts and in sales of package bees. Anything that seems to him to threaten his bread and butter money stirs up a storm.

But there are areas of interest where most can cooperate without giving up individual privilege. Beekeeping legislation can, and should be, backed by those who make a living from bees. State legislatures will listen to requests of an association when they might well ignore the wails of an individual. Are your state beekeeping laws satisfactory?

(Continued on page 505)

Bees on Display

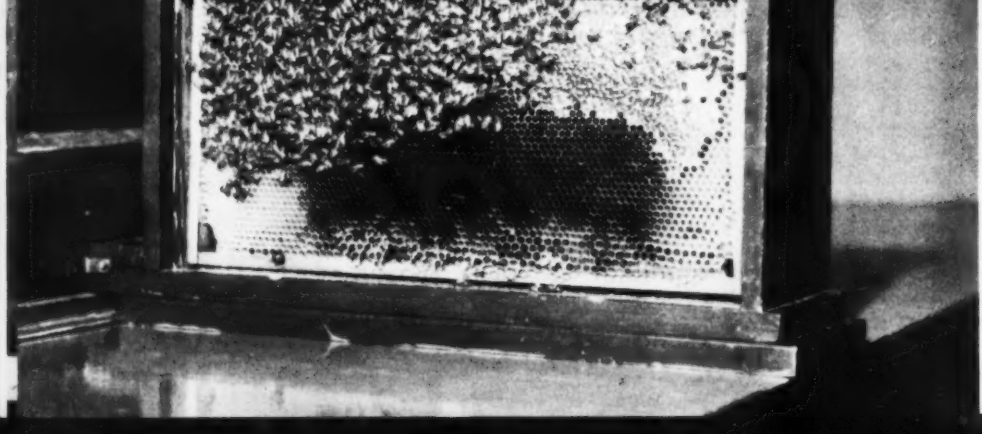
If you have never watched a colony of bees work, with the aid of an observation hive, you are missing a great educational experience.

PAUL S. GRIERSON
Millburn, N. J.

AN OBSERVATION HIVE has been a part of the equipment in the Children's Division of the Newark, New Jersey, Museum, for many years. Mr. Clarence Howk was the faithful attendant, spending a great number of hours during the summer seeing to their food needs, catching small swarms or removing honey when the super of box honey was capped. Mr. Howk's mantle fell on me as ill health forced him to let go. For several years we used the same regular single frame hive with four boxes as a super. Sometimes feeding was necessary, overcrowding was common, swarming would cause an alarm, the queen would lay in the super, and the children were inclined to disturb the bees by shaking the hive, knocking on the glass and dropping toothpicks and the like into the ventilation slots.

With the help of a beekeeper friend, Mr. Prescott Shreeve, the hive shown herewith was designed, built, and installed for summer use. Here the queen has two full nine-inch frames to work on. The four-box super has two wire-rod type queen excluders in its base so that Mrs. Queen stays out. You will note the heavy construction of the hive — like a battleship as compared with a torpedo boat. The effect seems to be as hoped for, the hive is so solid looking the boys have mostly given up

The hive is solidly constructed which discourages little boys from meddling with it.



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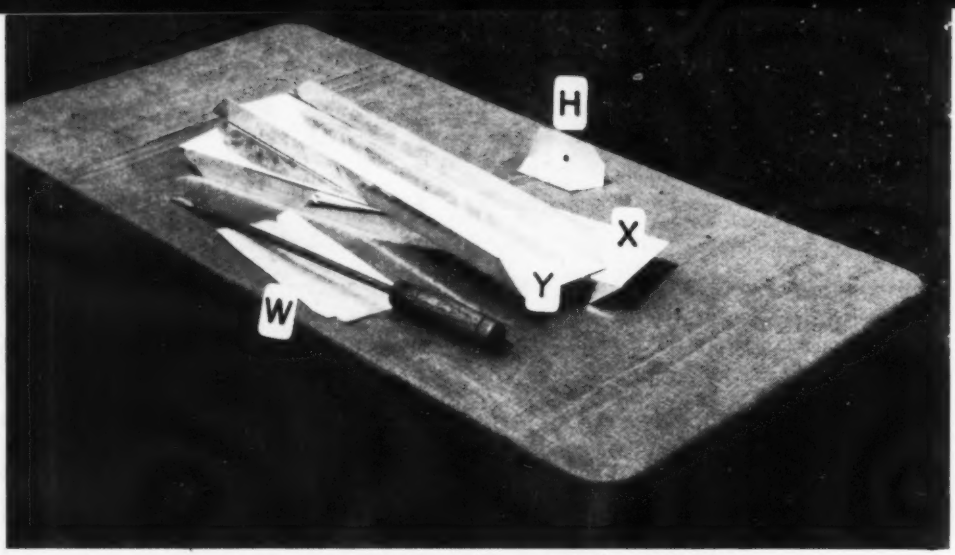
It will take this size observation hive to get the colony through the winter provided the ventilation can be worked out.

meddling and the bees go their way in peace and quiet.

The hive is so constructed that the middle and top sections as a unit may be removed without letting a bee escape. This is done by sliding two U-shaped pieces of aluminum back to back in between the two top and the one lower sections. See X and Y in picture. Aluminum pieces H and W are placed on the entrance of the lower section and the window opening respectively when the entire hive is being removed. This avoids escaping bees. The long shank screwdriver is furnished to make removal and replacing of screws an easy matter. Should the super alone need removal the same aluminum sheets are inserted as explained above. The glass panels are let into the wood on each end and the bottom. This aids in keeping the solid impression! All sections are held together with wood screws.

Should any of our readers want to construct a hive along the lines shown for museums, schools, or home installation, the usual allowance for bee space is, of course, necessary. The super glass should be separated 1/16" further apart than the boxes are wide, and the glass against the frames 1/16" further apart than the width of the end bars, and, as a check, about ⅜" to ½" further apart than the width of the frame top bar. This is to allow free passage of all bees from frame to frame. If glass panels are too far apart much burr comb will be built. No enclosing wood in panels is used and no special ventilation is provided. In this particular case no direct sunshine reaches the hive. The bees show no evidence of being uncomfortable. In some of our grammar school experience, where direct sunshine was encountered the bees absconded even from the best ventilated hive.

You will note that the hive described above is for summer use, from April



These are the pieces used to take the sections apart without letting bees escape.

1 to November 1. For the winter months we have experimented with a 3-frame hive as shown. Our main problem is temperature as the museum is kept at 72-80°F. all of the time. This coming season we plan to put a ventilator on top, the area of which can be controlled and it will be so constructed that no large objects can be dropped or pushed through. By having a free passage of air from the outside to push the warm air out at the top of the hive we are confident that the temperature in the hive can be kept at a suitable level.

Before deciding on this 3-frame assembly, a 3-frame hive was tested for 5 years in our home. The bees wintered better than the bees in the apiary. However, the temperature range and the hive construction were quite different. The glass sides were enclosed with wooden panels and the temperature was generally from 45-65°F.

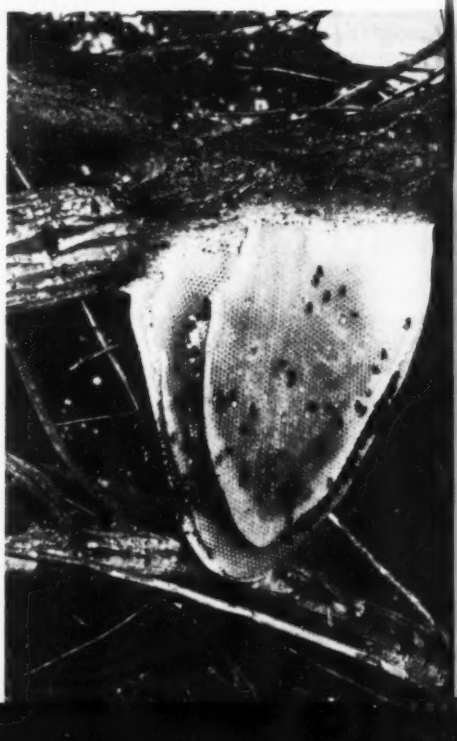
A Modern Home Southern Style

D. L. RENDER
Beech Island, S. C.

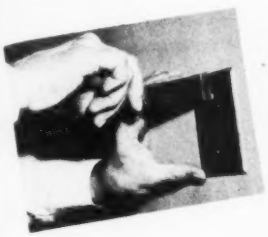
AFTER SEEING your April Fool hive in the April edition of Gleanings, I thought you would like to see an April home in the South.

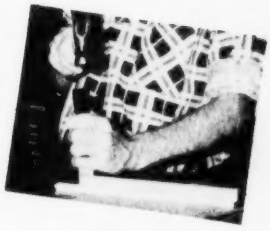
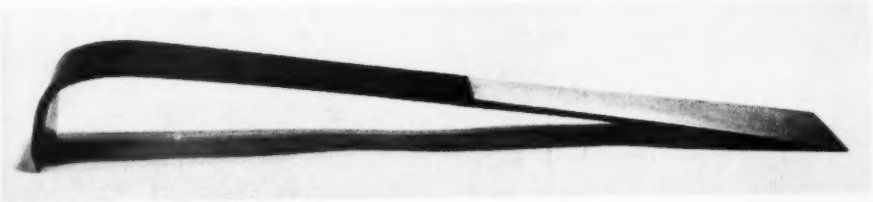
These bees swarmed on this tree in late summer of 1960. April of 1961 finds the bees have wintered fine and are building up rapidly. I would estimate their weight at about 40 to 60 pounds now.

I am rather new at beekeeping myself, but I have talked to quite a number of beekeepers and they all agree it is quite unusual.



Long Live the Hive Tool



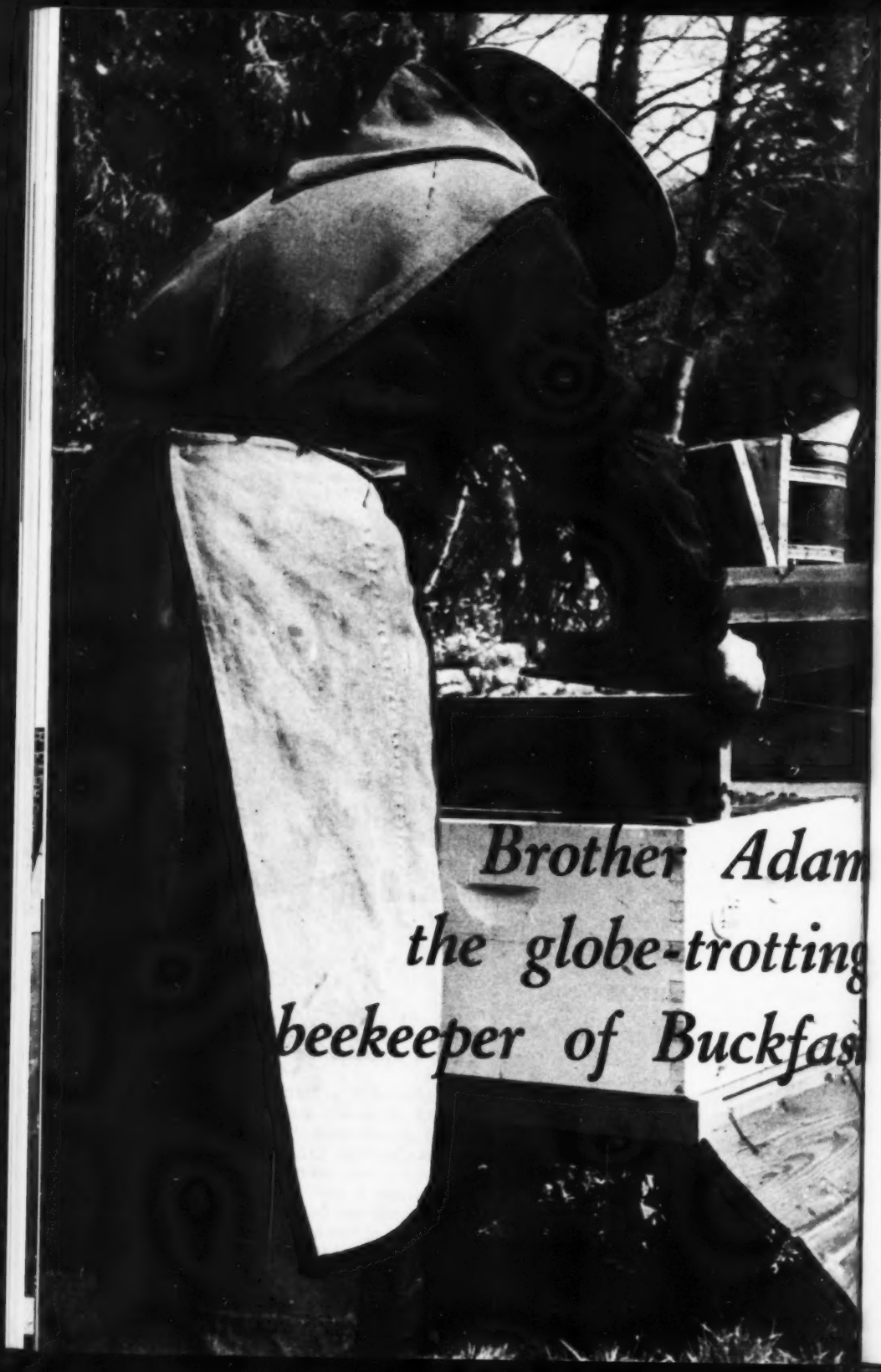



ROBERT J. WYNDHAM
Upland, California

FAMILIARITY BREEDS contempt. Perhaps this is somewhat of an exaggeration. But do we really appreciate the perfection of much of our equipment?

This is what I thought the other day, when I lost my hive tool and a screwdriver had to do. Never before was I so much aware of the perfection of my trusty hive tool, its simplicity, strength and functional design. In fact for years I had extended its use beyond the bee yard.

I found it a fine help when pulling weeds, a handy scraper when painting. And I bet that beekeepers more resourceful than I, have thought up more uses for this wonderful tool. In fact years ago I met a beekeeper who had sawed off the head of a small hammer and had it welded to his hive tool. He used it to nail down the hive lids when moving bees!



Brother Adam the globe-trotting beekeeper of Buckfas

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"And **staggering** is the term Brother Adam has applied to the bee he discovered in Central Anatolia, Turkey."

TREVOR HOLLOWAY
Westbury, Wiltshire, England

THE APIARIES at St. Mary's Abbey, Buckfast, England, and the name of Brother Adam, are known throughout the bee world.

Brother Adam has two great passions — his faith and bees. As far as bees are concerned he is one of the world's greatest authorities. At international congresses his brilliant papers hold audiences spellbound. He has met practically every leading apiarist in the world, and most of the American authorities are known to him personally. Many have visited him at Buckfast and others he has met at international gatherings.

A Benedictine abbey is of the soil and the Brothers of the community do their utmost to make it as self-supporting as possible. Beekeeping at Buckfast is therefore planned for large-scale production on a commercial basis. Side by side with the day-to-day running of the apiaries is being conducted a vigorous policy directed towards the breeding of improved strains of bees.

In England, and in many other countries, until recently, no sustained effort had been made to improve the bee. Great interest has been shown in all the latest gadgets and in every innovation regarding management, the design of hives and so forth, but the infinitely more important matter of the **improvement of the bee itself** has not been fully appreciated.

Hybridization is the only way the desirable traits of the various races can be integrated in one strain—and strains suitable for hybridization are only to be found in remote isolated country districts, where in complete seclusion the purity of the race has been preserved since ancient times.

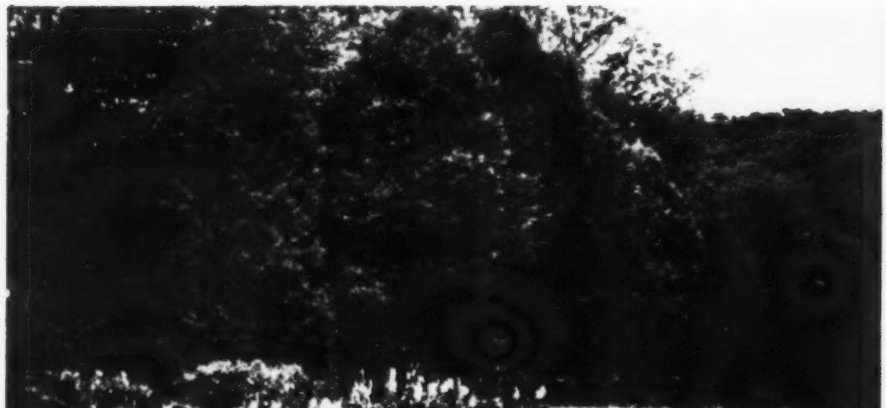
The monastic beekeepers of Buckfast therefore decided to undertake a series of journeys which will eventually cover all the countries bordering the Mediterranean that possess an indigenous bee of outstanding merit.

So far about two-thirds of the program has been completed, in the course of which Brother Adam has covered some 60,000 miles by car and a great many more by sea and on foot. The quest has led him to the wildest parts of North Africa, to Switzerland, Germany and Austria, far off the beaten track in Yugoslavia, Italy and Greece, and to remote parts of Israel, Jordan, the Lebanon and Cyprus.

This quest for the perfect honeybee has, if one may use the phrase, not been all "honey". Time and time again Brother Adam has found himself in the center of a Middle East flare-up and carefully-made plans have had to be abandoned. He has been caught in blizzards while combing mountain ranges; sand storms have overtaken him; and he has toiled mile after mile over heartbreaking country under a scorching sun.

One of his greatest disappointments was experienced during a recent visit to the Ligurian Alps in search of much-needed Ligurian queens for cross-breeding experiments. The search had proved very successful and Brother Adam packed his precious finds very carefully and left them in his room overnight for posting off to Buckfast the following morning.

But the next morning, to his dismay, both table and package were smothered in black ants. On picking up the package, thousands of the wretched creatures swarmed out of the cotton wool packing surrounding the cages. The ants had killed every queen and every bee. The fruits of long and difficult labor were lost, and he had neither the time nor the energy to retrace his steps to collect replacements.



Home apiary at Buckfast.

The trials and tribulations of Brother Adam have not been confined to roughing it, as every explorer must expect. His somewhat unusual luggage has brought him more than a fair share of Customs complications. When he entered Syria from Jordan with a valuable collection of samples for the Bee Department of the Rothamstead Research Station, the Syrian Customs authorities viewed his vast collection of glass tubes, each with its preservative, label and number, as being far too valuable to pass through without payment of a heavy deposit. The fact that he was on his way to Damascus made matters worse, for the authorities argued that this was a place where such specimens could be sold. It was only after hours of delay and payment of exorbitant dues that he was allowed to proceed on his way, with every case securely fastened with a lead seal.

These seals caused a wagon-load of trouble at every Customs point thereafter, for they not unnaturally gave rise to much suspicion and speculation. It was a miracle the specimens ever reached their destination, and few would have blamed the harassed Benedictine if he had dumped them by the roadside in despair!

Bees and flowers are naturally associated, and Brother Adam's writings on bees are frequently interspersed with vivid descriptions of the flora encountered on his travels. One need have no more than a passing interest in beekeeping yet find his writings of absorbing interest. "I have seen much of the flora of Algeria: pink drifts of asphodel; wide expanses carpeted in bright orange by the native marigold; giant clumps of glistening white **Erica arborea**; and thymes in mauve, blue and purple..."

Or this further example: "The narrow valley set amid the desolate hills of Moab, with its profusion of wild flowers, its masses of oleander in full bloom, and the vivid scarlet waxy blossoms of the pomegranate everywhere, combined together for a picture of unforgettable loveliness."

Brother Adam's comments on the various strains of bees that have been tried out at Buckfast show how profound have been his studies. He takes no facts for granted and passes no judgment on any type of bee until he has studied it for long periods at first hand. The following is typical, an analysis of the Carniolan bee:

"Her good features include great vitality and industry, good temper, a

keen sense of smell, a tendency to provide herself with adequate winter stores, and a long-reach tongue — very important where red clover is grown." But, alas, the Carniolan bee is not perfect, for Brother Adam lists her shortcomings as follows: "An uncontrollable urge to swarm, susceptibility to nosema, paralysis and acarine; and a reluctance to draw out comb foundations."

There may be no such things as a perfect bee or a perfect honey, but the beekeepers of Buckfast are well acquainted with the best in both categories. In a reference to the celebrated Fraulein Dr. Maurizio, of the Liebefeld Research Institute at Berne, Brother Adam writes: "It was in her department that we first tasted that very choice and delicious honey obtained from the **Alpenrosen**, a dwarf species of rhododendron which thrives only at great altitudes in regions of the Alps. In my opinion it is the loveliest honey produced on the Continent."

During his travels, the globe-trotting beekeeper of Buckfast has encountered primitive hives of many types — some built of mud, others composed of hollow stems of the ferula plant, or made of earthenware. Curiously enough, some of these primitive hives seemed to Brother Adam to operate as efficiently as expensive modern types!

Bees were on the property when the monks took over Buckfast in 1882. Between his travels, Brother Adam busies himself supervising the Abbey apiaries. At the present time these comprise 320 colonies for honey production and 500 nuclei for raising stock. Average yield over the past 35 years has been 60 pounds per colony. The monks themselves deal with the packing and marketing of their produce.

His Greatest Discovery

We come now to the story of what will undoubtedly be recorded in beekeeping history as Brother Adam's greatest discovery. When such an authority as he refers to a bee's production as "staggering", one is left in no doubt it is just that. And staggering is the term Brother Adam has applied to the bee he discovered in Central Anatolia, Turkey.

Modern Turkey is not a very large country, covering less than 300,000 square miles, and Brother Adam was surprised to find the region contained a remarkable variety of bees. The reason is that within the confines of Turkey can be found almost every type of

Buckfast bee breeding station on Dartmoor.

One of the outapiaries at Buckfast Abbey.

climate and vegetation, as well as variation in topography.

Central Anatolia is an upland steppe, with an altitude around 3,000 feet and surrounded on three sides by lofty mountain barriers. The winters are severe (minus 40°F. is common), whilst the summers are hot and dry. Spring flora is abundant, but is soon scorched and withered by drought and heat. As Brother Adam points out, only a bee endowed with exceptional stamina, industry and thrift, could make a living and survive in such conditions as this.

The small, unimpressive Anatolian bee, completely misled Brother Adam at first, but after a long period of careful observation at Buckfast its sterling qualities became evident.

In Brother Adam's own words: "I believe I can state in all truth that the Anatolian stands beyond any comparison — certainly in foraging powers and thrift. By mid-June a 12-frame modified Dadant brood chamber will be found chock-a-block with brood and stores, but she does not breed to excess out of season. Subsequent to the main honey flow, and in times of dearth, she contrives to husband her reserves in a truly uncanny way. In view of our uncertain climatic conditions and honey flows, I regard the thrift of the Anatolian as one of her most valuable economic qualities, a quality which we all know is largely absent in our present-day strains. She will survive when others die of starvation."

The results detailed below were obtained during two successive seasons from a first cross of Anatolian queens mated to drones of Buckfast strain. As far as can be ascertained, the results are far beyond anything previously achieved by any other race, cross or combination.

The first season under review was a poor one for honey production in the southwest of England. The only worthwhile honey flow came in May from sycamore, hawthorn and apple blossom. Average crop per colony of Buckfast strains amounted to only 26 pounds; that from the Anatolian colonies 63 pounds, plus 9½ pounds of winter stores over and above the general average.

The following season was described as "medium-good". This time the Buckfast colonies returned an average of 60 pounds; that of the Anatolian colonies more than doubled this figure at the amazing level of 132 pounds 14 ounces, plus 10½ pounds of winter stores in excess of the general average!

(Continued on page 510)

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Rate Yourself on Honey Price Support

A. B. KENNERLY
College Station, Texas

Check your answers on page 503

THE HONEY price support program for 1961 has been announced and you may have read something about it. (May issue of Gleanings.) Here is an opportunity to check yourself on your knowledge of the program. Go down the list of statements and mark whether you believe the statement is true or false. Answers appear on page 503. These answers which generally apply to all states have been taken from Chapter IV; Commodity Stabilization Service, and Commodity Credit Corporation, Department of Agriculture, subchapter B; loans, purchases and other operation. Part 434 - Honey, and have been checked for accuracy with the Texas ASC State Office.

True or False

1. — Honey producers interested in participating in the honey price support program should contact their County Agricultural Stabilization and Conservation Office for forms and information on the program.
2. — As part of the foreign aid program, loans and purchase arrangements will be made to honey producers in the continental United States and to honey producers in a selected list of foreign countries.
3. — Eligible producers shall be only those individuals that actually produce the honey, and associations of producers are not eligible for price supports.
4. — The quantity of honey for loan purposes when acquired by CCC shall be computed on the basis of 11 pounds for each gallon of the rated capacity of the containers.
5. — Honey shall be of the 1961 crop only. Honey still on hand from the 1960 crop will not be eligible.
6. — When application for a loan is made the county office shall draw samples of the honey and transmit them for grade and color determination, such samples to be furnished at no cost to CCC and shall not be considered in the weight of honey delivered to the CCC for loan purposes.
7. — Honey may be packed for price support purposes in any size containers provided such containers, as provided by regulations, do not carry the producer's labels.
8. — Loans and purchase agreements may be made only on honey in approved storage.
9. — Structures used to house honey other than that honey covered by a single price support loan shall be partitioned to separate the honey under loan from other honey.
10. — If bees are sold during the year of 1961, there is no provision whereby loan or purchase agreements can be arranged.
11. — The honey producer who signs a purchase agreement shall not be obligated to sell any quantity of the honey to CCC.
12. — Support rates for honey are less in states of Montana, Wyoming, Colorado and New Mexico and states westward than they are in states east of these.
13. — Honey from such floral sources as Gallberry, Raspberry, Sourwood, Star Thistle and Western Wild Buckwheat is not eligible for price supports.
14. — CCC requires honey producers to insure honey placed under the loan in the amount of the loan at the time of disbursement of the loan.
15. — Loans shall bear interest at the rate of 3½% per annum from the date of disbursement of the loan.

Iowa State Fair

JACK HAPP

THOUSANDS OF PEOPLE are expected to observe the National Honey Show this year, which is being held in conjunction with the Iowa State Fair, August 25 through September 3, 1961, in DeMoines, Iowa.

If you are proud of your honey product, then here is a chance to show it off and you may even win a blue ribbon or a trophy.

This is one of the best opportunities for beekeepers everywhere to help their industry by sending in samples of their choice honey and honey products to be displayed in a large and impressive exhibit.

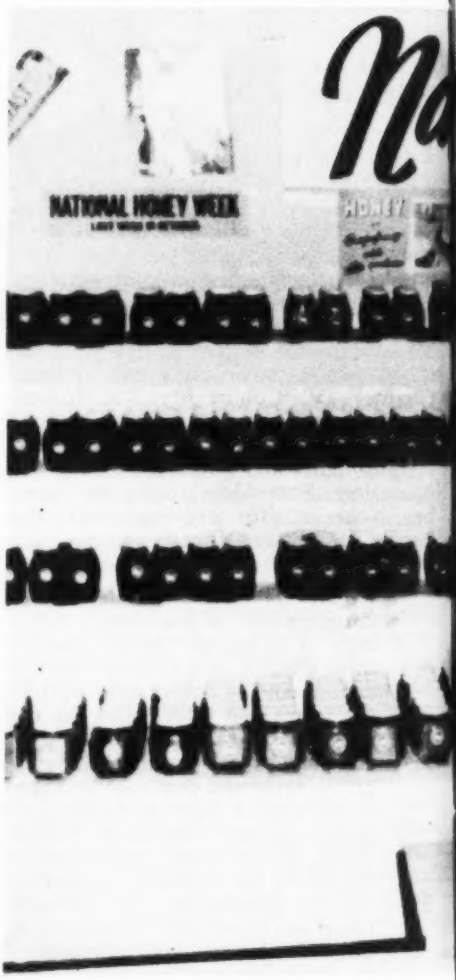
There are many classes in which to enter your honey....take your choice. All entries, whether they are from hobbyists with one hive or a commercial operator with 5,000 hives, are impartially graded by experienced judges.

No application for space is necessary for your entry and most important, there is absolutely no entry fee. All it takes is a little time to prepare your product for mailing and the cost of postage to send it.

Your entries should be filed with the Iowa State Fair, Des Moines, Iowa, by August 15, 1961 and your packages should be on their way in due time to reach the Fair Grounds before August 24, 1961. Your entry will be unpacked and attractively arranged in the exhibit by a competent committee.

According to Walter Becker, who was director of the National Honey Show for the past two years, the best way to pack your honey for shipping to insure safe arrival at the show is by placing your entry jars in their original partitioned carton the empty jars came in, then box or frame the carton with wood.

For section honey, place in individual sectioned cartons, in the center of an empty one pound jar carton and surround with crumpled newspaper, packed tightly.



Seymore Bailey (center) judging 1960 entries

Mr. Becker found that when section honey was wrapped individually in newspaper, it had a tendency to melt and arrive in poor condition.

All entries should be addressed correctly, wrapped and tied properly. Send your entry to Mr. Glen Stanley, Super-

Will Host 1961

while Monicca McNutt and Walter Edwards, Jr. look on.

intendent, Apiary Department, Iowa State Fair, Des Moines 19, Iowa.

Last year there were only 27 states represented in the National Honey Show, with only 49 exhibitors. This year let's take advantage of this excellent opportunity for National recognition for our Industry by sending in our entries right now.

It would sure make an outstanding exhibit if only five beekeepers from each state sent in entries. Since Texas and Alaska are so large, we should expect at least 10 entries each from them. How about it down there in my home state?

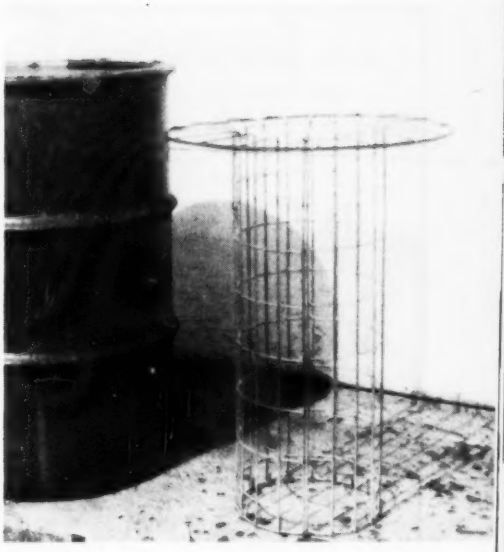
Certainly there are more than 27 States that produce Prize Honey!

NATIONAL HONEY SHOW CLASSES

	1st	2nd	3rd	4th	5th	6th
A—Light colored honey, clover or alfalfa source, 6 1-lb. jars	$15	$12	$10	$8	$6	$4
B—Light colored honey, any other variety, 6 1-lb. jars	15	12	10	8	6	4
C—Golden colored honey, 6 1-lb. jars	15	12	10	8	6	4
D—Amber colored honey, 6 1-lb. jars	15	12	10	8	6	4
E—Dark colored honey, 6 1-lb. jars	15	12	10	8	6	4
F—Comb honey, 6 sections	15	12	10	8	6	4
G—Chunk honey, 6 2½-lb. jars	15	12	10	8	6	4
H—Creamed granulated honey, 6 1-lb. jars	15	12	10	8	6	4
I—Beeswax, 5-lb. (approximately) in 1 piece	15	12	10	8	6	4
J—Cut Comb Honey, 6 combs	15	12	10	8	6	4
K—Honey use exhibit (25% of sweetening used to be HONEY)	15	12	9	6	3	1.50
Lot 1 Cake	5	4	3	2	1	.50
Lot 2 Cookies, 12 pieces	5	4	3	2	1	.50
Lot 3 Candy and Confections, 12 pieces	5	4	3	2	1	.50

Walter Becker (right) Superintendent of the 1960 National Honey Show discusses an entry with Walter Edwards, Jr. Note packed entries on dolly.

What Is It?



ANYONE WHO has bought large amounts of honey has likely been surprised at some of the objects which occasionally turn up in the containers along with the honey. However, the screen-like object pictured here, which was found by a good honey packer in a barrel of honey from South America, is a puzzler.

The object is pictured beside a 55 gallon drum, for size comparison. It is well made of 3/16 inch galvanized steel wire. Some of the connections were made by tightly bending the wire, others were made by welding.

Our idea is that it might be a support for a cloth strainer. Can any reader give us more information?

Another Snake Story

REED SAGER
Rochester, New York

MR. W. J. PEARCE from Golden, Colorado, told a fascinating bee-snake story in the May Gleanings and as snake stories always interest me, I think a lot of other people are also interested, so I'll tell of a little experience I had with bees and snakes, but quite different from Mr. Pearce's.

I remember one of my teachers telling us youngsters that garter snakes and some other little snakes were useful and should not be molested or killed as they consume a lot of young mice and grubs and are therefore useful to man.

Later I met with a back and brown striped snake about 30 inches long in our planter seemingly sunning himself, not the least bit perturbed over my presence, just watching me as I watched him, wondering whether I should feel offended or pleased because he showed no fear. Somehow I always feel pleased when an animal shows trust or friendliness toward me and so I left Mr. Snake alone.

A couple of times I saw him lay right on the alighting board in front of a hive not doing anything but watching me and flashing his pretty forked red tongue. I never saw him catching bees.

The following spring at the first check-up, I found Mr. Snake dead inside of the hive, hanging across and through two holes in the middle of the brood chamber in a decomposed condition, also I found a mouse's nest in the second story and a lot of dead bees and frames of pollen chewed up.

Now what was the cause of the loss of that colony? The snake or the mice?

I reasoned that likely the mice invaded the hive, destroyed brood and pollen frames. Mr. Snake went in after the mice, got stung to death, but, what killed the bees?

There was still a lot of honey and pollen left.

What is your opinion, Mr. Pearce?

87th CONGRESS
1st Session

S. 2158

IN THE SENATE OF THE UNITED STATES

June 28, 1961

Mr. ELLENDER (by request) introduced the following bill; which was read twice and referred to the Committee on Agriculture and Forestry

A BILL

To amend the Act relating to the importation of adult honeybees.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 1 of the Act of August 31, 1922 (42 Stat. 833; 7 U.S.C. 281), is amended to read as follows:

"SECTION 1. In order to prevent the introduction and spread of diseases dangerous to the adult honeybee, the importation into the United States of all honeybees of the genus Apis in the adult stage is hereby prohibited, and all adult honeybees offered for import into the United States shall be destroyed if not immediately exported: Provided, That such adult honeybees may be imported into the United States by the United States Department of Agriculture for experimental or scientific purposes: Provided further, That such adult honeybees may be imported into the United States from countries in which the Secretary of Agriculture shall determine that no diseases dangerous to adult honeybees exist and that adequate precautions have been taken by such countries to prevent the importation of honeybees from countries where such dangerous diseases exist, under rules and regulations prescribed by the Secretary of the Treasury and the Secretary of Agriculture."

This is a copy of Senate Bill 2158, introduced by Senator Ellender of Louisiana, amending the Act relating to the importation of honeybees. (See article on page 492.) For the good of the industry all beekeepers should notify their Congressmen as to how they feel concerning this bill.

Research Review

DR. NORMAN E. GARY
Research Associate
Cornell University
Ithaca, N. Y.

Queen Rearing Caused by Amputation of Queen's Front Legs:

RECENT EXPERIMENTS at Rothamsted Experimental Station in England indicate that the amputation of a queen's front legs can cause bees to rear supersedure queens. Shortly after leg removal, eggs appear in queen cell cups of the test colonies. New queens were not always produced from the first eggs laid in the cells. As many as 30 queen cells with eggs were seen at one inspection in one colony.

It is not known if queen cell construction is caused indirectly by the physical injury to the queen or by the loss of the use of the front legs. It is known that queens produce a chemical called queen substance in the mandibular glands of the head which prevents queen cell construction in the colony. Under normal circumstances bees appear to lick this chemical from the surface of the queen's body. Perhaps the front legs of the queen may be used to transfer queen substance to the body surfaces. Presumably, removal of the queen's front legs would interfere with queen substance distribution which would allow the colony to rear new queens, thus inducing supersedure.

Simpson, J.
Induction of queen rearing in honeybee colonies by amputation of their queens' front legs. Bee Craft 43:61. 1961.

Distribution of Honeybees in Alfalfa Pollination:

AN INVESTIGATION concerning the distribution of bees in an alfalfa field has been made in Utah. On two occasions, colonies were placed in the middle of a square, 150 acre field of alfalfa. The use of a special Cordovan bee strain and radioactive phosphorus enabled positive identification of all foraging bees from these colonies. Population counts of foragers were made and samples were collected at various stations in the test area as well as in neighboring fields. It was found that the bees oriented mostly to the field on which they were placed. Furthermore, the pattern of foraging activities remained rather symmetrical around the apiaries and shifted very little during the two week period after bees were placed in the field.

Levin, M. D.
Distribution of foragers from honeybee colonies placed in the middle of a large field of alfalfa. Journal of Economic Entomology 54:431-434. 1961.

Hypopharyngeal Gland Development in Worker Bees:

BROOD FOOD is secreted by the hypopharyngeal glands of the worker bees' heads. Experiments in England indicate that these important glands probably do not develop sufficiently to nurse brood when the workers are kept solely on a carbohydrate diet. Neither is a protein diet alone sufficient for maximum development of the glands.

These glands apparently reach maximum development when workers receive a normal diet and are stimulated by the presence of larvae that need feeding.

Free, J. B.
Hypopharyngeal gland development and division of labor in honeybee (**Apis mellifera L.**) colonies. The Proceedings of the Royal Entomological Society of London. 36:5-8. 1961.

NEWS REEL

Brenda Hubal (center) was chosen Medina, Ohio's Honey Queen for 1961 during the celebration of "Sweetest Week Honey Festival", commemorating the time when The A. I. Root Company was reputed to be the largest honey packer in the world. Brenda's attendants and runners-up are, Janice Buddie (left) and Kathleen Collins (right).

Jack Deyell places a hat full of bees on his head at a bee exhibit during "Sweetest Week" celebration in Medina, and never received a sting.

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John Root was recently interviewed by Dorothy Fuldheim on WEWS – TV's One O'clock Club. John explained the language of the bees to the Cleveland area viewers with the aid of a Honeybee Hobby Hive.

Mrs. C. D. Floyd and daughter are ready to register and distribute samples of honey at the American Beekeeping Federation Exhibit booth during the National American Home Economics Association Convention which was held in Cleveland. Mr. and Mrs. Floyd who are from Minnesota and their three pretty daughters set up the honey exhibit and were hosts to the many Home Economists who attended the convention. Mr. Floyd is Marketing Chairman for the American Beekeeping Federation.

Editorials

National Honey Show, August 25-September 3

YOU HAVE AT least two weeks to prepare and send in your entry to the National Honey Show. (See page 472.)

Last year there were 27 States with 49 entries to represent the whole NATIONAL HONEY INDUSTRY.

The fruit exhibit in the same building last year completely outshone the honey exhibit in size, as did the flower and nut exhibits. Is this why the American public consumes so little honey?

Comply With Honey Marketing Requirements

SOME OF THE STATES are changing their inspection laws regarding feeding sulfa for the control of American foulbrood.

A survey made by a mid-western college of surrounding states reveals that 19 out of 35 states would not permit the feeding of sulfa in any form for the treatment of this disease. However, some states are now revising their laws to permit the feeding of this drug for the eradication of this disease.

Some states will not allow the use of this chemical in treating American foulbrood but will allow it to be used for its prevention.

There are many pros and cons on the use of antibiotics in the control of bee diseases and beekeepers should check carefully with their State Bee Inspector before using them and if they do use them they should use extra precaution in making certain that these drugs do not contaminate their surplus honey.

Large packers are now requiring certification that all honeys purchased are free from chemicals and foreign matter and comply with the Food and Drug requirements.

Some Newspaper Items Hurt Our Industry

IT WOULD APPEAR that an increasing number of items are appearing in the press regarding the alleged damage bees are doing by stinging people. Unfortunately the majority of people associate stings with the honeybee and do not realize that there are other kinds of bees that may sting human beings.

It is a fact that there are very few fatalities due to stings of the honeybee. Fortunately few people are allergic to bee stings. Those who are should use every precaution to avoid being stung.

As a means of counteracting the adverse publicity that is hurting our industry, beekeepers should submit articles to the press pertaining to the value of bees to our economy, especially agriculture. Bees do perform an essential service in pollinating over 50 farm crops. Comparatively few people realize this fact.

Our country should have more hives of bees to do a more thorough job of pollinating agricultural crops, also to gather the immense amount of nectar available. It has been estimated that 90 percent of the nectar secreted goes to waste annually for the lack of honeybees to collect it.

Argentine Rape as a Source of Nectar

SINCE ARTICLES on Argentine Rape have appeared in our journal recently we have received many inquiries from beekeepers over the country regarding its value as a honey plant.

We decided to get some actual experience with the plant and sowed three acres of it, May 23, near one of our apiaries. Today, July 11, some of it is in bloom and a few bees are visiting it.

One plant we pulled out of the ground measured 29 inches to the top of the root which extended 8½ inches into the ground.

Since quite a number of beekeepers are trying out this plant, we shall doubtless be receiving reports from them as the season advances. It seems probable that Argentine Rape is better adapted to some types of soil than others.

Dry Ice for Removing Surplus Honey

DURING THE YEARS a number of methods have been devised for removing honey from hives. The beekeeper with only a few hives can shake or brush the bees off the combs, then carry or haul them to the honey house. The bee escape has been in use for many years and has some advantages.

The carbolic acid method came into use some years ago and is being used by quite a number of commercial beekeepers. Its main advantage is that it saves considerable time over other methods. Its possible disadvantage is that there is some danger of damaging the flavor of the honey unless extreme care is taken in applying the acid.

We learned recently that Earl G. Barnes, Dillon, Montana, uses dry ice to remove honey. We wrote Mr. Barnes regarding his experience in using dry ice and the following is his reply.

"Relative to the use of dry ice for removing bees from honey this is what I have come up with: Buy a 50 pound cake of dry ice (approximately the size of a five gallon honey can). Have your butcher saw it across the end in one inch slices. Put this ice in a tray similar to a pad with hardware cloth on the under side to hold ice in place to eliminate handling ice with hands. Use this the same as acid pads from hive to hive.

"This method worked for me last year on hot days and cold days, also before and after frost, just as well as the acid method on a real hot day. This method also stopped all robbing of the bees.

"My theory is that the bees are affected by the chill rather than the gas from the ice. The ice can be transported from apiary to apiary in a small camp freezer."

We Can't Control the Weather

FROM A RECENT semi-monthly Honey Marketing News Report of the U. S. Department of Agriculture, it would appear that a variety of weather conditions have prevailed over the country recently, making it rather difficult to get a true picture of weather and crop conditions.

Variable weather conditions have occurred in the mid-western states. Frost occurred in parts of central and northern Wisconsin and in contrast, temperatures reached 99 degrees in some parts of North Dakota the same week. Heavy rains fell in some parts of Texas while little or no precipitation occurred in some areas of the inter-mountain states, especially in parts of Nevada, Utah, Montana, and North Dakota.

As a rule one extreme follows another. We never know until the end of the season what the honey crop will be. One of the best crops our bees in western Ohio ever produced occurred during a dry spell in late July and early August when alfalfa with its long roots extending down into the sub-soil yielded an unusually good honey crop.

Even though we have no control over the weather we do have some control over the condition of our bees. We should do all possible to maintain colonies with maximum populations in readiness to take full advantage of honey flows that may occur when weather conditions are favorable for nectar secretion.

Live and Learn

PROPOLIS PETE

UNLESS SOMETHING in the nature of a miracle happens real soon, this year will go down in history. I have heard of bumper crops, and had them. I have heard of short crops, and had them. But never in my beekeeping experience have I had a year of no crop. As of July 1 this looks like it will be it.

The maddening part of it is that this year also has provided the most lush and promising looking pasturage. Lawns are white with dutch clover. Along the roads, where in other years you could see a few small patches, there are big stretches. Fields left to rest, planted to a mixture of rye and vetch show more flowers than ever before, yet the bees are not even making a living. In the middle of what should be the biggest flow ever, the bees are almost destitute.

With all this wealth available, our first thought is that the bees have been reading the papers, and gone on strike, or are fixing to go on relief. Such is not the case. When they can find what they are looking for they are perfectly normal. For instance, yesterday I was looking over a new development that a builder has started just across the road from here. Since the land is not under cultivation any more, a few patches of wild turnip have come up and blossomed. Out of the 40 or more acres, my guess is that the patches would amount to about two acres if they were in a single stand. And they were simply alive with bees gathering nectar, thus proving that if it is there they are ready, willing, and able. Two acres of pasturage, even if it is good, is not enough to support 21 colonies, and put up a surplus of honey.

Be that as it may, I have learned something this summer that may be of interest to you. I started the season with 26 colonies that came through the winter in fair to excellent condition. Then an epidemic of queen failure made necessary a few drastic steps. All together nine of the colonies had to be requeened fast, because a week or 10 days of no egg laying at the peak of what should be the brood rearing season could be disastrous. The regular ritual of requeening takes that long, if you kill the old queen and then put the new queen in her cage between the frames and let the workers eat her out of the cage.

I have heard of the laughing gas method of introducing a queen, and also have tried it with success. But I don't think that knocking the bees out does them any good. To me they seemed dopey for a couple of days after the treatment. Also, on several occasions, I have had the new queen accepted, and after laying a couple of eggs, superseded. So this year I tried the same method, but left out the ammonium nitrate. The theory was that if I killed the old queen around noon, and then just after sunset, smoked the living daylights out of the colony with ordinary burning burlap or old rags, that I would accomplish the same thing. I did just that, and the bees did just what I wanted them to do, which in itself is a pretty rare thing.

Whether or not it will work for you I don't know. Maybe it won't work for me the next time. But this time it worked and now, about six weeks after the operation, the queens are still there and doing as well as they can, under the present working condition. Maybe that could be the reason why it worked. I won't know until next year, when I am going to try it again.

If you are interested, this is why I think that it will work again. At this time of the year, the bees had about eight hours to discover and mourn their loss, but had not had the time to do something about it. Then I came along with my smoker, and so disorganized their poor addled brains that they forgot their troubles for the moment, in the face of what very well could be the danger of the colony being wiped out. Also the stink from the smoke covered the colony odor for several hours, and by the time they got the hive smelling it's old sweet self, there was a queen ready and able to take up where the old queen left off. Maybe they did and maybe they didn't know the difference, but anyway they were back in business again and that is all that I wanted.

Let's Talk About HONEY PLANTS

DR. HARVEY B. LOVELL
University of Louisville,
Louisville, Ky.

IN TERRE HAUTE recently we purchased a quart jar of honey syrup put up by Wagner Industries, Inc., Chicago, which was diluted with cane sugar and flavored with cinnamon. It was being used for pancakes in a restaurant and they told us it was one of their most popular syrups. It is not as sticky as pure honey and easy to pour. This is another way to use honey.

Colorado Bee Notes quotes Mrs. Catherine Wilson, who lives in Salt Lake Valley, Utah: "Anise Hyssop (**Agastache anethiodora**) is recommended for planting. A hardy perennial that reseeds itself each year and has a large number of blue floral clusters that are extremely attractive to honeybees. The first blossoms opened on the 12th of June. This species is an excellent honey plant and also provides the bees with some pollen. Anise hyssop would be a colorful addition to any flower garden and wide propagation would be of enormous value to the entire honey industry." Experts on honey plants will remember that this is one of the plants introduced by the late Frank Pellet and highly recommended by him. I have had a few plants growing in my garden for several years and they are always popular with the bees.

I have received a report (No. 94) from the Agricultural Station at the University of Arkansas, Fayetteville, entitled: Nectar plant and pollen yield in southwestern Arkansas (1945-51) by Victor C. Thomson. He lists the more important honey plants as holly, rattan vine, blackberry, sweet clover, buckwheat vine or eardrop vine, sumac and Spanish needles. He also mentions vetch, black gum and cotton, chinaberry tree, climbing hempweed and peppervine. Most of the article is concerned with the weights of colonies

Anise Hyssop (**Agastache anethiodora**).

day by day and with the amount of pollen obtained in pollen traps, from sample colonies.

I drove across southern Indiana recently and noticed that the shoulders of the road were lined for miles with yellow sweet clover in full bloom.

At Terre Haute, Indiana, there were several beds of Bachelor's Buttons growing along an alley and in several adjacent yards. Honeybees were very active on the flowers, gathering both pollen and nectar. Bachelor's Buttons are related to yellow star thistle, that famous California honey plant.

I recently had a request for information on the beebee tree (**Evodia danielii**). Yesterday I received a reprint on this tree written by Fred Schwoebel of the Morris Arboretum, a reprint of the speech he made at the International Beekeeping Congress in Italy. Mr. Schwoebel writes, "My observations on this tree lead me to believe it is likely to become an important honey plant in a large portion of the United States. During its three-week blooming period the bees work it most actively, setting up a hum which is heard for some distance from the tree. The bloom is profuse and occurs at a most opportune time, late July or early August, when our honey flow from other sources is not sufficient to maintain colony strength. It produces tremendous quantities of seeds and is easy to propagate. It is an extremely rapid grower; an annual gain of six feet and more after the second year is not unusual. Also seedlings come up in quantity in the neighborhood of seed-bearing trees."

Mr. Schwoebel visited and studied **Evodia** in arboreta in Ireland, England, Scotland, Denmark, Germany, and Switzerland in 1938. The trees in northern Europe appear to bloom later than in the United States. "Reports from garden personnel indicate that the bloom attracts honeybees quite as much as with us. Since returning to the United States a letter was received from Dr. F. N. Hawes at Kew Gardens in London on observations made at my request. This states that **Evodia hupensis** flowers much earlier than **E. daniellii. E. hupensis** was observed in flower and being actively worked by honeybees as early as July 17th. **E. daniellii** was about half in flower on September 1 and still being worked freely by bees on September 26th, with unopened buds of all sizes still present on that date."

Give a Cookbook

SUMMER IS THE SEASON for weddings and this usually finds most of us faced with the age old problem of what to get the bride.

You can never go wrong by giving her a good cookbook. It will be a gift that she will appreciate and can use for many years.

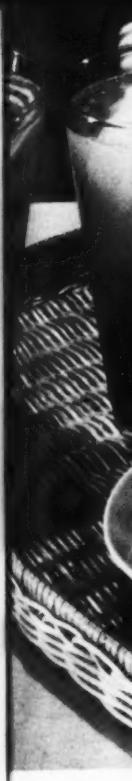
Here are a few that any bride will be glad to have in her kitchen.

"Old Honey Favorites"....This will introduce the young home-maker to the nutritious and delicious assets of cooking with honey. You may order it from your nearest A. I. Root Dealer or directly from the American Honey Institute, Madison, Wisconsin. Price 25¢.

"Rose Recipes"...Every bride wants to cook something special for her new husband. She will find many exotic, yet easy to prepare, recipes in this book. For instance, Apple Rose Fluff served under candle light, or rose honey with fresh, red strawberries. Doesn't that sound romantic? Order from HOUSE OF ROSES, 244 Saint George St., Saint Augustine, Florida. Price: Paperbound, $1.50. Clothbound, $2.95.

"The Progressive Farmer's Southern Cookbook"....There is no need for the bride to worry about her cooking if she is lucky enough to own this cookbook! It is complete. It tells in precise and easy to follow directions how to plan and prepare food for every occasion...for the family, a tea or a church social. All of the recipes are tested and vary from simple basic foods (such as "frying an egg") to fancy foods like Honey Pecan Fudge, Shrimp Bisque or Green Gumbo des Herbs.

This is one of the most useful and fascinating cookbooks on the market today. Order from The Progressive Farmer Company, Birmingham, Alabama. Price: regular edition: $4.95.



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Chewy honey coconut squares and honey sweetened lemonade for hot summer afternoons. —Photo courtesy The Kellogg Co.

Good for Nibbling

MRS. BENJ. NIELSEN
Aurora, Nebraska

ISN'T IT NICE to have something tasty to nibble on during hot summer afternoons? In the cool, cool morning we prepare honeyed lemonade or tea to be iced, bake a batch of honey goodies and we are all set for long hot languid summer afternoons. If friends bestir themselves and drop in, cooling refreshment is ready in a twinkling. For something more substantial Nature's finest sweet drizzled over ice cream makes a super sundae with a minimum of effort. A grand boost for honey!

Crisp or chewy--I have chosen one of each for this month. I like to keep on hand a batch of the plain dough chilling in the refrigerator. And as I bake one batch, I stir up another. You may like to vary this basic dough by adding chocolate chips or butterscotch chips or nutmeats.

Happy nibbling to you!

Chewy Honey Coconut Squares

One cup sifted cake flour, ⅛ teaspoon soda, ⅛ teaspoon salt, 3 tablespoons butter, ½ cup sugar, ¼ cup honey, ¼ teaspoon vanilla, 2 egg whites, 1 cup flaked coconut and 1 cup bran flakes.

Sift together flour, soda, and salt. Melt butter in saucepan. Remove from heat and add sugar, honey and vanilla; blend well. Add unbeaten egg whites, stirring only until combined. Add flour

(Continued on page 507)

Results of honey analyses as printed by the IBM computer are discussed by Dr. J. W. White, Jr. and Dr. R. E. Lothrop, Assistant Director of the Eastern Utilization Research and Development Division. Dr. Lothrop is well known to beekeepers and processors, having devoted about ten years to honey research. – USDA Photo by M. C. Audsley.

A Survey of American Honeys

10. Summary[1/]

This is the last of a series of ten articles on the different honeys of America.

JONATHAN W. WHITE, JR.
Eastern Regional Research Laboratory
Eastern Utilization Research and Development Division
Agricultural Research Service, United States Department of Agriculture
Philadelphia 18, Pennsylvania

1/ Last in a series of articles describing a large-scale study of the composition of honeys from over the United States. Complete data interpretation and conclusions will appear in a forthcoming Department of Agriculture publication.

IN THE PREVIOUS articles in this series, we have attempted to describe briefly the high-lights of our analytical survey of the composition of American honeys. We have presented average values for the composition of honey, based on 490 analyses, and for honeydew based on 14 analyses. A listing of 74 types of honey and 4 honeydews has been included which shows generally how the various kinds of honey compare with average values and with one another.

The kinds of sugars, rare and common, that are found in honey were discussed. All honey samples were found to have the same sugars present, but the relative amounts did differ considerably.

Differences in composition of honey have been considered that can be ascribed to area of production. Probably the only reliable way to assess this factor is by statistically comparing average values for several samples of the same type of honey from different areas.

In other articles the relationship of color and of granulating tendency of honey to its composition were discussed. It was shown that the granulating tendency of honey can be predicted from its dextrose and water content. A D/W ratio of 1.70 or less generally means a non-granulating honey, while a value of 2.10 or more predicts a relatively rapid complete granulation. Values between these imply partial granulation.

In comparing dark honeys with light honeys, we have confirmed that the former show higher ash and nitrogen contents. We have also shown that the dark honeys are lower in dextrose and levulose content, granulate less, and are higher in acids.

Storage of honey at ordinary temperatures has been seen to cause considerable loss in free simple sugars, increases in more complex sugars, some increase in acids and rather considerable (3% per month) losses in diastase content.

The laboratory work in this project, representing nearly 10,000 separate analyses, was carried out by the individuals named in the first article in this series. We could not have done this work without the active cooperation of hundreds of honey producers, packers, extension specialists, apiary inspectors, national and state organizations and their officers and others. They cannot be named here, but we are greatly appreciative of their cooperation.

All of the individual analytical results, complete descriptions of all samples, and names of those cooperating appear in the final technical bulletin to be published by the Department of

Data obtained by analysis of honey was processed on the computer by Charles Hopkins of the Computing Laboratory of the Agricultural Research Service at Beltsville.—USDA Photo.

Agriculture. This will also contain descriptions of the analytical methods used, a review of the literature and show the statistical evaluations of the data.

In addition to the principal tables of data, averages are included for all floral types and blends in which more than one representative was present. Average values of all honey samples as classified by plant family is given, and a table showing the average composition of honey from each of the 47 states having samples, as well as a map showing sample distribution.

No mention has been made in these articles of the flavor of honey. This does not mean that it is not considered important, but simply that it is difficult to measure and practically impossible to describe. It is, of course, probably the most important single attribute of honey, and possibly the one that is least understood chemically. More attention should be given to flavor and its maintenance in honey, especially protection against processing factors within our control.

Frozen Honey Peaches

ANN MICHELE HAPP
Medina, Ohio

DELICIOUS RIPE PEACHES drizzled with light golden honey ..... ummm.....what a treat!

This is the time of year that peaches are fully ripe and just right for eating ....and when they reach the eating stage, they are just right for freezing too. So, now that they are in season and quite abundant, let's plan ahead and store some with their savory flavor in the deep freeze for the family to enjoy next winter.

Nutritionists tell us that honey has many vitamins and is easy to digest, so this natural sweet makes an excellent syrup to use for freezing fruits. You will find that peaches frozen in a honey-pack have a delightful flavor. When thawed, they are covered with an appealing glaze, which helps them remain firm and fresh appearing until ready to use.

A very light, mild flavored honey should be used to make the honey-pack. Dark honey will tend to overpower the delicate flavor of the peaches. Save your dark honey for table use or for baking fruit cakes.

To make the honey-pack you mix three cups of honey to five cups of warm (never hot) water and stir until well blended. This makes two quarts. Store the pack in the refrigerator until thoroughly cooled and until ready to use.

When selecting your peaches for freezing, use only sound, ripe ones. Do not scald the fruit as you do for canning. Merely wash, halve, and pit, then peel off the skins with a knife, working quickly.

When you are ready to place the peaches into freezing containers, remove the cooled honey-pack from the refrigerator and stir in one teaspoon of ascorbic acid (vitamin C), mixing well. Ascorbic acid helps to prevent discoloration of your fruit. Put one-half cup of the honey-pack into a pint container, then add peaches. Press the fruit down firmly, but gently, and add more honey-pack to cover. Leave head space. Seal and freeze at once.

As you serve these honey frozen peaches in mid-winter, in a delicately light shortcake, or sliced and covered with cream, you will be delighted with their exquisite flavor and succulent, mid-summer freshness!

"Esteem no man for his good looks, nor for his outward show despise him; yonder bee is an inconsiderable creature and yet there is a world of sweetness in the harvest he wins."

A bee is always humming because she is too busy to stop and learn the words.....Bill Gordon, WEWS-TV, One O'Clock Club, Cleveland, Ohio.

The Effect of the New Insecticide - SEVIN - on Honeybees

DR. ROGER A. MORSE
Ass't. Professor of Apiculture
Cornell University
Ithaca, New York

If a farmer in your area told you that he was going to spray his crops with SEVIN would you know what effect it would have on your bees?

SEVIN, (**1-naphthyl methylcarbamate**) a relatively new insecticide, is extremely toxic to honeybees. In tests conducted in the spring of 1960 an attempt was made to determine the value of confining colonies with top screens so as to protect them against loss from this material. In earlier experiments colonies located in areas which had been aerially sprayed with Sevin lost an average of 19,917 bees during the first six weeks after the application while check colonies lost only 2,936 bees during the same period (Morse, 1961).

In the spring of 1960, nine two-story colonies of honeybees were placed in a 1200 acre plot on which were deposited

1280 gallons of insecticide (854 pounds of actual Sevin). Open fields were not treated. The rate of application was 1½ gallons of spray per acre (by air) and one pound of actual Sevin per acre. The operation was under the direction of the Plant Pest Control Division of the USDA and the pest insect was the gypsy moth (**Porthetria dispar**).

The spraying was done with single engine planes (Stearman type) and six plane loads were deposited between 5:20 and 7:40 a.m. on the morning of May 28. The bees were in the area eight days prior to the application. There was no bee flight during the spray operation or for about one hour after it was completed. By mid-morning there was good bee flight and colonies were actively gathering pollen. The weather was good for bee flight all day on May 28. On May 29 there was some rain and the bees were able to fly only about two hours. Bee flight was good all day on May 30 and limited again on May 31.

The colonies were in an open field and were purposely sprayed. Very little dandelion (**Taraxacum officinale**) was in bloom at the time; some yellow rocket (**Barbarea vulgaris**) was present. The predominate flowering plant was wild apple (**Pyrus** sp.) which was common in the pastures in the area.

Traps described by Gary (1960) were affixed to colony entrances and the figures in Table 1 resulted from bees recovered from these traps. No samples were taken from the traps until the night following the spray operations. The traps had been cleaned the previous night. Three check colonies were located a few miles away from the spray area. The traps were checked each evening for the first five nights following the operations. During the next nine days the traps were checked every other evening and the colonies were then removed from the sprayed area after which time no further samples were taken.

It has been suggested that screening the colonies so as to prevent foraging would give protection against loss of bees from insecticide. In this experiment colonies were screened for 24 and 48 hours and the results are shown in Table 1 and Graph 1. Screening can be a dangerous practice and colonies which are unable to provide proper ventilation could die or suffer loss through suffocation. Screening is also costly. In this experiment screening saved many bees, but the data indicated that Sevin has a long residual action.

Brood rearing was evaluated periodically during the experiment and the data showed that egg laying by the queen was not affected materially. There were an insufficient number of colonies in the tests to determine if the insecticide adversely affected the queens. It is our opinion, however, that the queens were not affected by Sevin.

TABLE 1. Number of dead bees recovered from Gary traps as a result of Sevin air spray (total number killed in each group of three colonies).

	DATE									
	May				June					
Treatment	28	29	30	31	1	3[a]	5	7	9	Total
checks	106	104	108	91	57	44	63	107	82	1,058
not screened	5008	6268	3148	2356	1281	432	476	213	242	20,787
screened 24 hours	--	5599	3356	2291	1105	386	187	147	125	13,769
screened 48 hours	--	--	1478	667	452	245	303	162	125	4,267

[a] Collections made at 48 hour intervals on June 3, 5, 7, and 9. Values shown are one-half actual number for these dates.

During the period June 28-October 5 the colonies which had been treated produced an average of 113 pounds of honey while check colonies averaged 100 pounds. Whereas the colonies lost many of their field bees, they did recover well and there were no permanent adverse effects. It should be pointed out, however, that the first major honey flow occurred during the period July 6-17. By that time the colonies had made considerable recovery. A second flow from goldenrod (**Solidago sp.**) occurred about August 15-30. If the major honey flow had occurred earlier, such as late June, the treated colonies probably would not have produced very much honey.

Spray operations were also undertaken by the Plant Pest Control Division in other areas in the state and at least seven beekeepers had some bee losses. Three of these were commercial operators and the loss in each case was estimated to be slightly more than a ton of honey. Arrangements are being made to compensate the beekeepers for this loss. In none of these cases were the bees within areas being treated.

In two cases the distance was only a few hundred yards. In another instance the colonies were nearly two miles from the treated area. This last case deserves some discussion. The terrain indicated that the bees could have flown equally well in all directions. The treated area was a river bottom about two miles from the apiary. Presumably this area contained different plant species which attracted the bees this long distance. There were nearly 50 colonies in the affected apiary but only half showed any loss. Some dead brood could be found in the affected colonies about one week after the spraying. The number of dead bees in front of the affected colonies varied from a handful to several quarts. Several strong colonies showed no loss whatever indicating that bees from these colonies did not forage in the sprayed area.

European Foulbrood

In the experiments conducted in 1959 five of the 21 colonies within the area treated with Sevin showed symptoms of European foulbrood. In the 1960 tests six of the nine treated colonies had symptoms of the disease. Check colonies showed no signs of European foulbrood. Three of the colonies affected in 1960 had over 500 larvae dead from European foulbrood when examined on June 10. The remaining three colonies had 100 to 300 larvae affected. Signs of the disease were still present in four colonies on July 12. The spray was deposited at a time when the colonies were undergoing rapid growth. Therefore the stresses caused by excessive bee losses and possible contamination of the honeycomb with insecticide probably contributed to the development of European foulbrood.

REFERENCES:

Gary, Norman E.
A trap to quantitatively recover dead and abnormal honeybees from the hive. Journal of Economic Entomology 53: 782-5. 1960.

Morse, Roger A.
The effects of Sevin on honey bees. Journal of Economic Entomology. Accepted for publication. 1961.

"WELL, I'VE GOT A GOOD LOCATION AND BY THE TIME I'M READY FOR COLLEGE I SHOULD HAVE THE MONEY UNLESS J.F.K. GETS TOUGHER ON TAXES!"

KEEP

GLEANINGS

COMING

The Honeybee Act and The Acarine Problem

A. S. MIC
Agric. Res.

The Honey Bee Act was enacted by Congress in 1922. The Act restricts the importation of live honey bees (**Apis mellifera** L.) into the United States and is a preventive measure against diseases dangerous to adult bees, particularly Acarine disease. In 1947 further restrictions were imposed by amendments to the regulations of the original law. The Department of Agriculture hopes to broaden the Act to restrict importation of all species of bees belonging to the genus **Apis.** Recent intensive surveys throughout the United States have not revealed the presence of Acarine disease, which is caused by the tracheal mite **Acarapis woodi** (Rennie). External mites closely related to **A. woodi** have been found on bees from most regions of North America. Other actions taken by the U. S. Department of Agriculture to meet current problems related to the Honey Bee Act are discussed.

LEGISLATION ENACTED by the Congress of the United States on August 31, 1922, and commonly referred to as the Honey Bee Act, restricts the importation of live honey bees (**Apis mellifera** L.) into the United States. The purpose of this legislation is to prevent entry of diseases dangerous to the adult bee, particularly Acarine disease. Canada also has an Act restricting the importation of A. mellifera honey bees from abroad. These honey bees can be shipped freely between the United States and Canada with the understanding that both countries take mutual responsibility for enforcing the rules and regulations relative to the importation of adult bees.

Acarine disease is caused by a parasitic mite **Acarapis woodi** (Rennie), which infests the tracheae or breathing tubes of adult bees. The invasion of the tracheae by the mites shortens the life of the infested bee, which gradually becomes so weakened that it can no longer fly. Many bees die in the field, but many others are found crawling in front of the hive, unable to fly.

Acarine disease is usually spread by robbing, transferring bees, drifting, swarming, and the selling or purchasing of infested bees. The mites transfer directly from bee to bee. Therefore, infested adult bees must come in contact with uninfested adult bees for the disease to be transferred. Acarine disease does not always cause the death of the colony, but if many workers become infested through robbing, the colony may be quickly weakened and killed. The disease appears to be most virulent when it reaches a new area. Honey yields from infested colonies are reduced because of the short lives and continued loss of workers harboring the mites.

Acarine disease reached epidemic proportions some years ago in England and now exists in Europe, South America, Africa, and Asia. That it could be introduced into North America is a potential danger.

Control measures developed and applied in areas where the mite is established require much labor and painstaking application. The shipment of queens, packaged bees, and the movement of colonies in North America would certainly make control difficult should Acarine disease ever become es-

A. S. MICHAEL, Entomology Research Division, Agric. Res. Serv., U.S.D.A.

tablished in our large commercial holdings. Inexperience with the disease and the lack of knowledge of methods of treatment would further hamper our control efforts.

The Honey Bee Act, as originally written, permitted the United States Department of Agriculture, acting on behalf of public institutions and commercial queen bee breeders, to import queens for experimental purposes. However, the rules and regulations of the Act were later considered inadequate to prevent the introduction of Acarine disease into the United States. Therefore, the regulation and its accompanying rules were amended as of August 27, 1947, to restrict all importations of adult honey bees except those from Canada. Before recommending this change, the Department consulted with State entomologists, State bee inspectors, bee trade-journal editors, and queen bee breeders. With few exceptions they all urged that the change be made.

In January 1959, the American Beekeeping Federation and the Apiary Inspectors of America, assembled in convention at Tampa, Florida, adopted a resolution emphasizing the potential threat of Acarine disease to beekeeping in North America. In January 1960, this resolution was reaffirmed when the same groups met at Phoenix, Arizona. The Apiary Inspectors of America indicated their desire for better information with regard to the distribution, recognition, control, and eradication of the mite. At the same time, the Federation requested the United States Department of Agriculture to take whatever measures necessary to carry out a survey in North America for the presence of **A. woodi** and if possible to bring a technician from Europe to instruct American workers in the disease caused by this mite. The Apiary Inspectors of America agreed to cooperate in every way possible to obtain field samples for this survey.

The American Beekeeping Federation also suggested that an effort be made to send a worker to Europe for a period to study the techniques now being used in the recognition and control of Acarine disease and that a policy be formulated by the Department of Agriculture in cooperation with the Apiary Inspectors of America with regard to what action should be taken in the event that the disease is found in North America.

It is quite apparent that the Department of Agriculture, the Apiary Inspectors of America, the American Beekeeping Federation, and the Canadian apiculturists all recognize the potential threat of Acarine disease to the beekeeping industry of North America. Several governments have initiated the establishment of protective embargos in Latin America similar to the regulations applicable to North America against the importation of honey bees for the exclusion of Acarine disease. Some countries in the Western Hemisphere have only recently taken steps to organize quarantine agencies. Commercial beekeeping has expanded rapidly in Central and South America without systematic disease inspection and with uncontrolled foreign importation of bees.

Renewed interest in the Acarine disease problem has been stimulated by the discovery that the disease is in India and was found in **Apis Indica** (F.),

another species of honey bees, by its presence in at least three countries in South America, and by reported cases of in-pocket importation of queen bees by travelers unaware of the governmental restriction or the danger of introducing this disease. Also, there has been an understandable desire on the part of research workers to obtain honey bees from different regions of the world for genetic and breeding research.

The Bee Culture Laboratory at Beltsville, Maryland, which provides a diagnostic service for the beekeeping industry, has consistently examined, for the presence of the Acarine-disease-causing mite, all adult bees received from beekeepers and State apiary inspectors. Samples have been submitted from every State and many foreign countries. Through this regular procedure the first recorded discovery of **A. woodi** was made in a sample of **Apis indica** from India.

In response to the heightened interest in Acarine disease, the Department of Agriculture has taken the following action: In 1959 a survey was undertaken to obtain representative colony samples from numerous geographical locations throughout the United States. No tracheal mites, **A woodi**, have been found in over 12,000 examinations. State apiarists and university apiculturists have also examined large numbers of bees from their own States.

During this search for Acarine disease, external mites closely related to the parasitic tracheal mite **A. woodi** were found in samples of bees from most regions of North America. These external mites, which are apparently harmless to the honey bee, have been classified as **A. dorsalis** Morgenthaler, **A. externus** Morgenthaler, and **A. vagans** Schneider. These are the mites associated with the "Acarine scare" of August 1959, when a shipment from California was confiscated by Australian authorities because the bees were found to contain mites. More recently, the Australian authorities have confiscated shipments infested with mites from the States of Mississippi and Tennessee.

In all these shipments, neither the Australian nor the American authorities have been able to demonstrate the presence of the parasitic tracheal mite, **A. woodi.**

The external mites obtained during the course of the survey were transmitted for identification to E. W. Baker, mite specialist of the Entomology Research Division, U. S. Department of Agriculture. His study of these mites and of specimens of the tracheal mite has revealed an hitherto undescribed definite morphological difference between two of the external mites and **A. woodi.** The use of this character for separating the **Acarapis** species may eliminate such occurrences as the California, Mississippi, and Tennessee confiscations.

Since **A. woodi** has been found in **Apis indica,** the U. S. Department of Agriculture hopes to broaden the regulations of the Honey Bee Act to embrace all species of honey bees, including **Apis mellifera** (L.), **Apis indica** (F.), **Apis florea** (F.), and **Apis dorsata** (F.).

Action has been initiated to encourage Acarine disease research, particularly in India and Italy, where the disease exists and competent research facilities are available, and in other foreign countries where special funds are available under Public Law 480.

Plans have been completed for sending a bee-disease specialist to Europe for intensive study and observation at several of the leading laboratories specializing in Acarine disease. When he returns, this specialist will be available to assist Federal and State apiculturists in developing a quarantine and eradication policy that can be put into effect promptly should Acarine disease be introduced into North America. The policy will be submitted as a recommendation to the Department of Agriculture.

The possibility of bringing a leading European specialist in Acarine disease to the United States for several months is being explored. This specialist could advise Federal and State apiculturists as to the latest information available on the biology, diagnosis, control, and economic aspects of the disease.

The Bee Culture Laboratories of the Department of Agriculture have intensified their studies of procedures that would permit the introduction of honey bee stock for genetic and breeding pur-

(Continued on page 509)

A Talk To Beekeepers

M. J. DEYELL

August an Important Month for Beekeepers

AS A MATTER of fact all months of the year are important for beekeepers. It has been said that August is the beekeepers' New Year and by that is meant that the month of August marks the beginning of preparations for the succeeding year, especially for beekeepers who winter their bees out-of-doors. It is necessary to start preparing colnies for winter quarters.

Perhaps some of us do not realize that the beekeepers' New Year in the southern hemisphere would occur in February because they are six months ahead of us, or, we are six months ahead of them, Their winter months occur during our summer months. Did you ever stop to think that the cold winter winds in the southern hemisphere come from the south, not from the north as is the case in the northern hemisphere? I assume that beekeepers in the southern hemisphere would face their bees north so that the hive entrances would be away from the cold winds, whereas here in the north we face our hives south to help protect the bees from the cold northern winter winds.

To have strong colonies the queens must be of good quality. Some say that some queens do better work during their second year than they do during the first year. It would be difficult, perhaps impossible, to prove or disprove this statement. However, a good prolific queen is needed in each colony.

Just recently we read an article based on scientific research, to the effect that colonies headed with two year old queens are more likely to swarm than colonies with one year old queens. This would favor the idea of requeening annually.

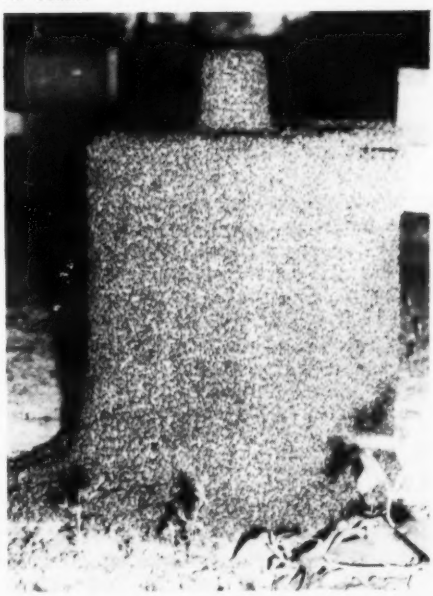
Some permit the bees to supersede old queens. This may be based on the law of survival of the fittest. One possible objection to this plan is that in some instances supersedure takes place during the spring of the year when bees are building up to maximum strength prior to the major honey flow. If supersedure takes place during the late summer or fall months it would not interfere with securing a good crop of honey, unless the major honey flow occurred during late summer and fall.

Remove White Surplus Honey Before Dark Honey Flow Starts

This applies especially to beekeepers living in areas where buckwheat is raised. Usually buckwheat is in bloom by the middle of August and bees work it for a couple of weeks while it is in bloom. Since buckwheat honey is very dark in color it is important that the white honey be removed in order to prevent its being mixed with buckwheat.

You beekeepers in buckwheat regions know that bees begin to work on buck-

A cell-building colony swarmed and decided to take up abode with another, but there was no room.



wheat early in the morning and continue until about 1:00 or 2:00 in the afternoon. If hives are opened after one or two o'clock the bees are likely to be very cross and will sting on the slightest provocation.

When I kept bees commercially in northern Michigan some years ago I learned a few things about managing bees during the buckwheat honey flow and learned them the hard way. I learned that it is unwise to manipulate colonies of bees during the time buckwheat honey is being stored, unless the bees are actually busy carrying in honey. One morning I opened a hive before the bees got started working and was driven out of the yard. It was partly my fault because I did not have my smoker well lighted nor my bee veil well adjusted.

Laying Workers and Drone Laying Queens

Some beekeepers may become confused in detecting the difference between these two kinds of colonies. A drone layer is a colony that has a queen that apparently has lost most of her fertility and lays unfertile eggs that produce drones. The queen will confine her laying to drone cells but sometimes she will lay some eggs in worker cells.

A laying worker colony is one that has a few worker bees that lay unfertile eggs in worker cells that produce only drones. The drone larvae is too large for the worker cells and when they are capped over the cappings protrude somewhat beyond regular or normal worker bee larvae.

Drone laying colonies seem to be much more common than laying worker colonies in this area. I do not recall having seen a laying worker colony during the past few years but I have come on to drone laying colonies. It is necessary to find the old drone laying queen and remove her before introducing a new queen. Laying worker colonies are usually not worth fooling with. I recall when I was in Michigan finding three or four laying worker colonies during the fall of the year. I set each colony on top of a normal colony late in the evening, molesting the bees as little as possible. The following morning I visited the colonies expecting to find some dead bees at the hive entrances but could find none. I may have placed a newspaper between the colonies being united. This would be better than uniting without a newspaper.

Beekeeping Areas are Changing

In western Ohio during recent years there is a late summer honey flow which begins about the third week in July after what used to be called the main honey flow from clovers during June and early July. This second summer honey flow comes mainly from red clover, alfalfa and in some areas soybeans.

Beekeepers should become familiar with these changing conditions which are due partly to a gradual change in farm crop rotation. Such changes are doubtless taking place in states other than Ohio.

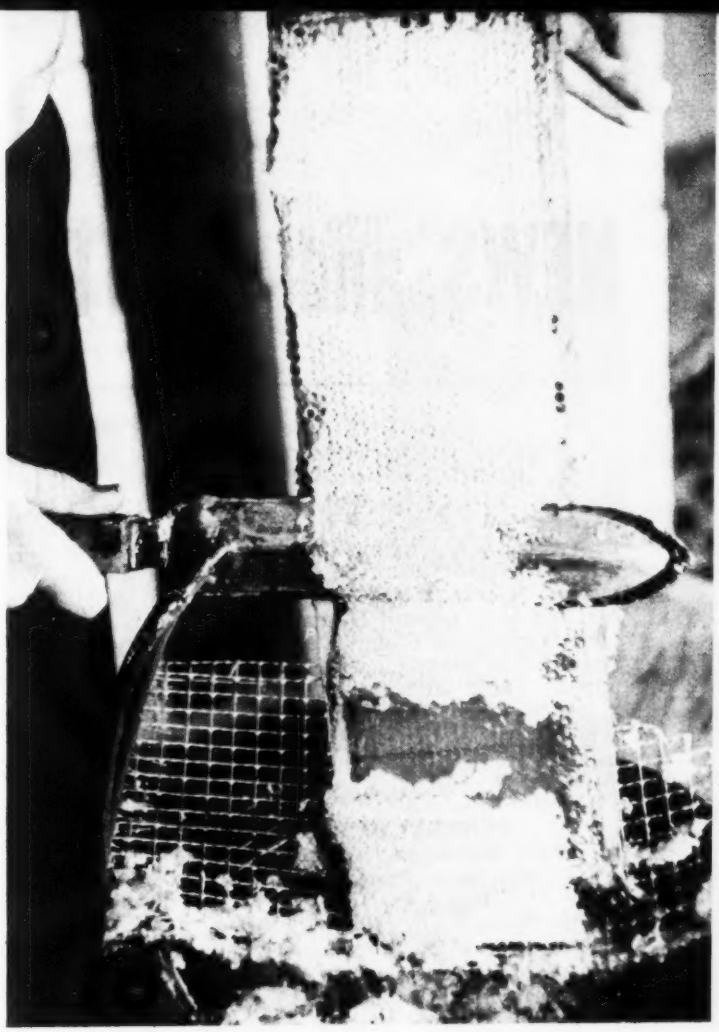
In order to obtain the maximum honey crop beekeepers should be ready to meet changing situations by adjusting their apiary management to meet the possible changes that occur.

Removing Surplus Honey

Beginners, as well as more experienced beekeepers, should be warned not to remove honey from hives, until it is properly cured or ripened by the bees. Honey with a high moisture content is likely to ferment. During the wet seasons it is difficult for the bees to drive the excess moisture from the nectar. During a dry season, moisture is expelled from the hives quite easily by the bees and the honey is ripened quickly. A good rule to follow is to leave the combs in the supers until they are at least three-fourths capped over. It may not be possible to have all combs entirely capped over. The bees usually leave a few uncapped cells, presumably as food for the bees in the event of a dearth of nectar.

The beginner is usually anxious to taste some honey that his bees have produced. If section comb honey is being produced it is possible to remove three or four sections from the middle of a super for table use. The remainder of the honey may be left on until the bees have finished capping it.

One method of removing supers of honey from hives is by means of a bee escape. This small device fits into the opening at the center of the inner cover. The bees enter a small hole in the top of the escape and go on down through



A steam heated uncapping knife cuts through the cappings with little trouble if it is sharp. Note: The operator cuts on an upward stroke with a sawing motion.

between two pliable springs into the brood chamber below. They are unable to return through the springs. If a bee escape is put under one or more supers in the afternoon, the bees will probably be out of the supers in two days. The supers can then be carried into the honey house.

Back-lot beekeepers do not need large extracting outfits. In fact, it is possible to handle honey from 25 or 30 hives with a three-frame extractor. When mounting the extractor be sure it is properly anchored to the floor. Where electricity is available a small one-sixth h.p. motor may be used to advantage.

Be sure to do the extracting in a building or basement that is bee-proof. It is an advantage to extract honey during warm weather when it can be thown out of the combs quite easily. Combs of approximately the same weight should be selected so that the machine may not be thrown out of balance. After the combs are uncapped with a hot knife they are placed in the baskets of the extractor and part of the honey is thrown out of one side of the combs which requires only a few revolutions. Then, the combs are reversed and all of the honey is thrown out of the opposite side. The combs are again reversed and the remainder of the honey is thrown out.

For extracting large quantities of honey on a commercial scale larger extractors and suitable equipment are needed. We shall try to carry an article covering commercial honey extracting in the near future.

NEWS and EVENTS

VERMONT
Beekeepers' Association, Inc.
North Hero, Vermont
August 26, 1961

The annual meeting of the Vermont Beekeepers' Association, Inc., will be held on August 26. The site of the meeting will be the summer home of Mr. and Mrs. Edward Hazen at North Hero, Grand Isle County. All persons interested in beekeeping are invited to attend. Those attending usually bring a picnic lunch. Information on the program will be published in the Association's News Bulletin about August 1. —Enoch H. Tompkins, Acting Sec.

PENNSYLVANIA
State Beekeepers' Association
Kutztown, Pennsylvania
August 19, 1961

The Pennsylvania State Beekeepers' Association will hold its annual summer meeting and picnic on August 19, 1961 beginning at 10:00 o'clock at the Kutztown Park just east of Kutztown on Route 222.

All beekeepers are invited to attend this all day affair so bring along a picnic lunch. A fine refreshment stand nearby will take care of those that so desire. A good program has been arranged, so plan to attend this outing and renew acquaintances.—Bob Crimbring, Sec.

KANSAS
Midwestern Beekeepers' Association
Stilwell, Kansas
August 13, 1961

The Midwestern Beekeepers' Association will hold its Annual Picnic at the farm home of Chas. Webb, Stilwell, Kansas, Sunday, August 13, 1961. Stilwell is on Rt. 69, south from Kansas City. Directions will be given at Stilwell.

Come early, bring a picnic lunch, and be prepared for a good time. Contests will be held with worth-while prizes for the winners. The honey judging will feature prizes for the best chunk, comb, and extracted in three divisions — very light, light, and amber. So doll-up your new honey and bring it along.

Everyone welcome. Bring your family and friends. See you at Chas. Webb's, Stillwell, Kansas, August 13. —James A. Worrel, Sec.

BEE MUSEUM IN NORWAY

The first Bee Museum in Norway was opened last week in the fjord village of Billingstead near Oslo. The museum has already got together an impressive array of interesting exhibits, and a special section has been set aside for a library with old and new literature on beekeeping in various countries around the world. The driving force behind this new venture is Mr. Odd Rosenberg who is the secretary general of the Norwegian Beekeepers' Association (Kristian Augustsgate 14, Oslo). — P. Prag

PENNSYLVANIA
BEEKEEPING SHORT COURSE
August 21 to 25

This course of one week's duration, will be given at Penn State, August 21 to 25, inclusive. It consists of a complete series of lectures and demonstrations. The demonstrations are conducted in the honey house and five apiaries owned by the University. The program ends with a banquet Friday evening the 25th. For program and general information write to Dr. Fred Snyder, Director of Agricultural Short Courses, Armsby Bldg., University Park, Pa.

(Continued on page 506)

Obituaries

L. T. FLOYD 1878-1961

CANADIAN BEEKEEPERS learned of the death of one of their fine old beekeepers, L. T. FLOYD, on May 23, last.

L. T., as he was affectionately called by his many friends, served as provincial apiarist for two provinces, starting his career as apiarist and chief inspector in New Brunswick. After a few years, he moved to Manitoba where drier climate made working conditions to his liking. He served the provincial government as chief inspector from 1922 to 1944 during which time Manitoba became a leading province in honey production. This came about in a large part due to the extension program under Mr. Floyd's direction, which advocated the extensive use of package bees, a practice still the principal system in use.

Retiring from government service in 1944, Mr. Floyd, always a person who enjoyed a challenge, took up beekeeping in a semi-commercial way at Austin, Manitoba, making his residence there until 1958 when he chose to return again to the hills and valleys of his native province. He made his home with a sister, Mrs. John Woods, at Hampton, New Brunswick, in his final years.

Mr. Floyd will be remembered for his Irish temper and quick wit which frequently created lively situations at trade conventions both in Canada and the United States.

He is survived by two sons, Clare D. Floyd of Excelsior, Minnesota and James A. Floyd of Toronto, Canada. Mrs. Floyd, the former Stella Davis, preceded him in death in 1943.

WINFIELD GEAR

THE MANY friends of WINFIELD GEAR will be grieved to learn of his death on June 10th in the Corning Memorial Hospital, following a long illness at his home in Tehama, California.

Mr. Gear was born December 25, 1880, in Galt, California. Winfield became interested in beekeeping at an early age and was known for his wide experience in the fundamentals of beekeeping and queen rearing not only in California but also in Canada. For the past 30 or more years he has engaged in the business of rearing package bees and queens and the quality of his queens was appreciated as far away as Australia. He was always ready to help those who came to him for help and advice and cooperated with his fellow beekeepers for the betterment of the industry. He maintained his lively interest in bees to the very last.

Mr. Gear is survived by his wife who was Miss Isabella Brown before their marriage in Taber, Alberta in 1938, and by their three children Bob, 20, Paul, 17, and Katherine, 14. Mrs. Gear worked with her husband with the bees for many years and will continue to operate for package bees and queens with the aid of her children until the boys are able to take over. She is well qualified to maintain the high quality of the bees and queens and to give the satisfactory service to their customers, some of whom have ordered packages and queens without a miss for over 30 years.

We all wish her well.

(Continued on page 506)

Buy and Sell

Classified rates: 18¢ per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it) count as one word. Copy should be in by the 10th of the month, preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. HUBBARD APIARIES, ONSTED, MICHIGAN.

IOWA HONEY, one can or truck loads. RUSSELL D. SMALLEY, BEAVER, IOWA.

CLOVER extracted honey in sixties. ABRAM BRUBAKER, 1525 September Dr., LANCASTER, PA.

TUPELO, wild flower, alfalfa, or orange, in 60's. LANCASTER COUNTY DUTCH GOLD APIARIES, 910 State St., LANCASTER, PA.

HONEY—In any size container, also Mail Order Dealer for Bee Supplies. Write for prices. L. E. ALLEN, TIPTON, MICH.

FOR SALE—White clover and light amber goldenrod honey, in 60-lb. cans, truck or carload. CLOVERDALE HONEY CO., FREDONIA, NEW YORK.

MICHIGAN'S finest raspberry, basswood, clover comb honey in 4 x 5 window cartoned sections. Deluxe extra fancy, $9.00 case; Extra fancy, $8.50; Fancy, $7.50; No. 1, $6.50; No. 2, $5.50. E. Z. QUICK WAY B FARMS, BOYNE FALLS, MICHIGAN.

NEAR WATER WHITE Orange honey. New crop - Florida. HUBBARD APIARIES, ONSTED, MICHIGAN.

WHITE CLOVER and white clover basswood honey in sixties. Any amount. Can deliver truck loads. PAUL ENGELHARDT, ANTWERP, NEW YORK.

BLUEBERRY, Fruitbloom, Clover or Goldenrod honey in 60's. Strained and heated to 160°. NORMAN SHARP, FISHERS, N. Y.

CLOVER COMB HONEY in the beeway sections. RALPH MORGAN, Trenton Road, UTICA, NEW YORK.

CLOVER section comb honey. C. W. SCHRADER, WATERVILLE, N. Y.

FOR SALE — Section and cut comb honey. Probably some buckwheat. 208 N. Fourth St., TITUSVILLE, PENNA.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE — We cannot guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on C.O.D. terms except where the buyer has thoroughly established his credit with the seller.

WANTED—All grades of extracted honey. Send sample and price. DEER CREEK HONEY FARMS, LONDON, OHIO.

HONEY WANTED for bottling, all types in drums, tins, trailer and car lots. Send samples each lot. Write: CHAS. E. FARRIS CO., 99 Hudson St., NEW YORK CITY. Est. since 1910.

CASH FOR BEESWAX. Write as to quantity and we will quote price. MUENCH-KREUZER CANDLE CO., INC., SYRACUSE, N. Y.

WANTED—White extracted or comb honey. Send sample. MILLERSPORT HONEY CO., MILLERSPORT, OHIO.

WRITE FOR SHIPPING TAGS and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 per cent saving. WALTER T. KELLEY CO., CLARKSON, KY.

WANTED—Buckwheat and light amber honey. EASTERN FOOD PRODUCTS, 421 Bedford Ave., BROOKLYN, N. Y.

WANTED—Honey and Beeswax. WALLY'S BEE ENTERPRISE, Box 266, WALTHILL, NEBRASKA.

BEESWAX WANTED—Highest prices paid in cash or trade for bee supplies. THE A. I. ROOT CO., MEDINA, OHIO; COUNCIL BLUFFS, IOWA; SAN ANTONIO, TEXAS.

WANTED—Honey in 60 pound cans, also beeswax any quantity. L. E. ALLEN, TIPTON, MICHIGAN.

ALL GRADES extracted honey wanted in both 60 pound cans and 600 pound drums. PRAIRIE VIEW HONEY CO., 12303 12th St., DETROIT 6, MICHIGAN.

WANTED, chunk comb and extracted honey. Mail sample and price. STOLLER HONEY FARMS, LATTY, OHIO.

WE RENDER cappings, old combs and buy your beeswax. Shipping tags sent on request. M. R. CARY CORP., GPO Box 818, SYRACUSE 1, NEW YORK.

WANTED — Chunk and extracted honey. Send sample and price. RONALD CULP, CIRCLEVILLE, OHIO.

BEE SUPPLIES FOR SALE

WRITE FOR CATALOG—Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. HUBBARD APIARIES, Manufacturers of Beekeepers' Supplies and Comb Foundation, ONSTED, MICHIGAN.

THE BIGGEST Bee Supply Catalog published (64 pages) free for the asking. Listing many items not found in other catalogs. No agents—buy direct and save 20%. WALTER T. KELLEY CO., CLARKSON, KENTUCKY.

QUEENBEE PAINTING OUTFITS, $1.50. INTERLOOKERS, $3.00 postpaid. SOUTHWICK APIARIES, WABAN, MASS.

FREE CATALOG—Cypress bee hives and bee supplies. Save up to 40% on hives that last. MYERS CRAFT MANUFACTURING CO., BURGAW, NORTH CAROLINA.

BEFORE YOU SELL your honey or buy your honey containers see HUBBARD APIARIES, ONSTED, MICHIGAN.

FREE Pair Summer Cool Bee Gloves with each purchase of HUBBARD'S Master Electric Uncapping Knife at $13.75 Postpaid anywhere in the U.S.A. HUBBARD APIARIES, ONSTED, MICHIGAN.

USED EQUIPMENT FOR SALE

350 HIVES BEES, plenty supers, nearly all 10 frame size, standard depth, good locations on yearly rental, near Santa Paula, California. Or will trade up or down for hives in Saskatchewan. Box 601, RESEDA, CALIFORNIA.

FOR SALE — Miscellaneous Used
1 - 1000 pound Clark Lift Truck
1 - 4000 pound Clark Lift Truck
1 - 50-Frame Woodman
1 - 30-Frame Woodman
1 - 24-Frame Radial
1 - 4-Frame Reversible
Ask for list of used Honey Tanks and other Extractors. HUBBARD APIARIES, ONSTED, MICHIGAN.

FOR SALE — 20-frame Simplicity extractor, belt drive, no motor, $125.00. WALTER BURKEY, 56 Lloyd Ave., MALVERN, PA.

EXTRACTORS — One with standard and one with 12-inch baskets. OLIVER MEYER, PRESTON, IOWA.

FOR SALE — 3 good used honey extractors, 3-frame, 2-frame and 1-frame. Root bee supplies and honey containers. K. L. SLINGERLAND, WESTTOWN, N. Y.

FOR SALE

TWENTY ACRE TRACT, modern home, honey house with other buildings. 232 colonies bees, equipment. CARL HAAG, ALTON, IOWA.

BEES AND QUEENS FOR SALE

WE USE ALL POSSIBLE CARE in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

CARNIOLAN and CAUCASIAN BEES for 1961. Booking queens, each $1.25, clipped and marked. 2 pound package with queen, $4.00. 3 pound package with queen, $5.00. LEWIS & TILLERY BEE CO., R. 3, Box 261, Phone DU 2-8371, GREENVILLE, ALABAMA.

ITALIAN and CARNIOLAN QUEENS, $1.00 each. LUTHER PICKETT, EFLAND, N. C.

PRODUCTIVE ITALIAN QUEENS—$1.00 each. 10 up, 90¢. SHIRL BAKER, MECOSTA, MICH.

QUALITY ITALIAN QUEEN BEES—Summer Prices—each $1.00, 5 or more, 90¢ each, 25 or more, 85¢ each. A. G. WOODMAN CO., GRAND RAPIDS 4, MICH. or LENA, S. C.

DOUBLE GRAFTED Jumbo Italian Queens, $1.20 each, $12.00 per dozen. SHEPPARD APIARIES, ABERDEEN, N. C.

FOR SALE as unit or in part 2,000 colonies with choice Wisconsin locations. Crop average per colony up to 250 pounds. Terms to suit available. SCHULTZ HONEY FARMS, RIPON, WISCONSIN.

HONEY LABELS
Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.
C. W. AEPPLER COMPANY
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"SWARMING STOPPED COLD"
95% Foolproof
No Gimmicks
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Bigger Crops - Better Beekeeping
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Glencoe Illinois

J. E. WING & SONS
49 Years Continuous Service
Italian Package Bees and Queens
Our Specialty
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CONNEAUT
BEST SIXTY of the SIXTIES
MOST VALUE
MADE BY FOLKS WHO CARE
Handled by
Reliable Jobbers
THE CONNEAUT CAN CO.
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HONEY WANTED
Carloads and less than carloads. Mail sample and best prices in all grades.
W. F. STRAUB & CO.
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HONEY PLANTS our specialty. Catalog on request. PELLET GARDENS, ATLANTIC, IOWA.

BALL CLOVER SEED – Makes good growth in cold winter months and excellent bee pasture in spring – has survived temperatures of -9°F., over 2300 blooms per square yard. Five pounds plant one acre on well prepared seed bed. Five pounds, $7.50 p.p. Write for quantity prices. CARTER PERCY, WEYANOKE, LOUISIANA.

MISCELLANEOUS

BEES REMOVED from house or tree or hive without touching either house or bees. Bees will then move honey into hive. Save property, honey, and bees with my method. Send $2.00 for details. Satisfaction guaranteed. GEORGE HAWKINS, Rt. 1, LAWSON, MO.

RENDERING every day in our all new plant. All honey saved from cappings. Rendering slumgum and old combs. Write for free shipping tags and rates. HUBBARD APIARIES, ONSTED, MICHIGAN.

OF INTEREST TO WOMEN

PLASTIC FREEZER CONTAINERS – Square pints, $9.95; quarts, $15.00 per hundred, postpaid. Sample pint, 25¢. OXBORO, Box 7031 CF MINNEAPOLIS 11, MINN.

WANTED

LARGE BEE SUPPLY Manufacturer and Honey Processor wants Supply Dealers and Honey Buyers. Write for Catalog and Honey Prices. HUBBARD APIARIES, ONSTED, MICH.

WANTED TO BUY – Clover comb honey in clean sections and no travel stain – within driving distance. Write P.O. Box 885, SPRINGFIELD, OHIO. SWISHER HONEY and BEE SUPPLIES.

ROYAL JELLY

SUPER STRENGTH 100 mg. Royal Jelly capsules in bottles of 100 for $10.00. FRAIRIE VIEW HONEY CO., 12303 Twelfth St., DETROIT 6, MICHIGAN.

PURE ROYAL JELLY – $8.00 per ounce, postpaid. Write for Wholesale prices. THE STOVER APIARIES, INC., MAYHEW, MISS.

MAGAZINES

THE SCOTTISH BEEKEEPER (The official organ of the Scottish Beekeepers' Association.) Scottish in character, international in appeal. Annual subscription $2 post free. Sample copy from ROBERT N. H. SKILLING, F.S.C.T., 87 King St., KILMARNOCK, AYSHIRE.

INDIAN BEE JOURNAL, know interesting facts concerning the honeybees of India. The only Bee Journal of India published in English. Subscription Rs. 12/- or Sh. 17/6d (Sterling) or $2.75 per year (INTERNATIONAL M.O.). Sample copy 2s. or 25 cents. Can be had from The Managing Editor, Indian Bee Journal, Naini Tal, U.P., India.

PROFIT AND HEALTH—Raise dairy goats. Learn how. Monthly magazine, $2 yearly; sample and information 25¢. DAIRY GOAT JOURNAL, COLUMBIA T3, MISSOURI.

INTERESTED IN ANGORA GOATS? Read the SHEEP and GOAT RAISER, Hotel Cactus, Box 189, SAN ANGELO, TEXAS, the only ranch magazine published serving the Angora Goat Industry. Subscription, $3.00. Sample copy 25¢.

BEE WORLD, the international journal of the Bee Research Association published monthly, contains the latest research reports on bees and beekeeping, and also Apicultural Abstracts. Bee World is $9.00 a year to non-members. but the B.R.A. membership subscription of $7.00 includes Bee World. B.R.A. members in America are served by the B.R.A. American Committee, and have their own Branch Library at O.A.C. Details free (or with specimen Bee World and new B.R.A. Handbook, 50 cents) from Apiculture Department, Ontario Agricultural College, Guelph, Ontario, Canada.

JENSEN'S QUALITY QUEENS

Dadant Starline Hybrid

1-24, $1.30 25-99, $1.15 100 up, $1.00

Jensen's Magnolia State

1-24, $1.00 25-99, 90¢ 100 up, 80¢

JENSEN'S APIARIES

Macon, Miss.

QUEENS

ITALIAN

NORTHERN TESTED STOCK

A Dependable Source of Good Early Queens

June 1 to October 1

75¢ each, any number

We ship only the best.

A. J. BOETTGER

P. O. Box 1523 Naples, Fla.

WEAVER'S

Dark

ITALIAN QUEENS

1 to 19 . . $1.00 20 to 99 . . 90¢

100 up . . . . . 85¢

Weaver Apiaries

Navasota, Texas

Phone: TA-52312

When Answering Advertisements, Please Mention GLEANINGS IN BEE CULTURE

Answers to True or False Statements on page 471

1. (T) Application should be made for price support at the county office serving the county in which the honey is stored.
2. (F) Loans and purchase agreements will be made to honey producers for eligible honey produced only within the continental U. S.
3. (F) An eligible producer shall be any individual or other legal entity, including a partnership, association or corporation. There are special provisions for bona fide producer-owned and producer-controlled marketing associations of honey producers to participate in the program.
4. (T) Only exception is honey acquired in 5-gallon cans with the average net weight per can rounded to the nearest whole pound or 60 pounds per can whichever is lower.
5. (T)
6. (F) The weight of the samples is included in the weight of honey delivered to CCC.
7. (F) Honey shall be packed in metal containers of a capacity of not less than 5 gallons nor greater than 70 gallons and of a style used in normal commercial practice in the honey industry. The 5-gallon containers shall be new, clean, sound, uncased and free from appreciable dents and rust. Steel drums shall be new or used drums which have been reconditioned inside and outside.
8. (F) Loans on honey shall be made only on honey in approved storage, but purchase agreements may be made without regard to whether the honey is in approved storage.
9. (T) Structures shoud be partitioned to preserve the identity of the honey covered by each price support loan, and to segregate the collateral honey from any other honey in the storage structure. Collateral honey shall be so marked as to be readily identifiable as such.
10. (F) The beneficial interest in the honey shall be in the producer tendering it for a loan or for delivery under a purchase agreement and must always have been in him, or must have been in him and in a former producer whom he succeeded as owner of the bees before the honey was extracted.
11. (T) However, the quantity stated in the purchase agreement shall be the maximum quantity he may sell to CCC.
12. (T) States east of Montana, Wyoming, Colorado and New Mexico receive support prices at a rate of .9 of a cent more per pound on the various grades and color. Support prices range from 12.9 cents down to 8.4 cents in the eastern states.
13. (F) These sources are eligible for price supports and are included with a longer list containing such sources as alfalfa, clover, huajillo, fireweed and mesquite. Some sources that are not eligible as either table honey or nontable honey include bitterweed, chinquapin, rabbit brush and queen's delight.
14. (F) However, if the producer insures such honey and indemnity is paid thereon, such indemnity shall insure to the benefit of CCC to the extent of its interest, after first satisfying the producer's equity in the honey involved in the loss.
15. (T) In case of fraudulent representation of the loan documents or in obtaining the loan, interest on the principal and costs increases to 6% per annum.

QUEENS

Carniolan and Caucasian

Be assured of maximum honey crop by using these line-bred queens for requeening or making increase, bred generations for gentleness, quick build-up and high production. These bees will winter in any state or province in Canada when given sufficient stores. No package bees this season account of last September 10th storm.

Queens, $1.45 each Air Mail

DISCOUNT ON QUANTITY

W. D. REAMS

Box 458 Ph. ORange 5-2732 LaBelle, Fla.

Who's Right?

GEORGE I. ZETLER
Duke Center, Pa.

MY NEIGHBOR is a beekeeper. He states that he has had bees for 60 of his 80 years, and in the 30 years that I have lived beside him he has not had a crop failure, requeened, culled broodcomb, had a winter loss, caught a swarm or painted equipment.

He may be classified as a "LET THEM ALONE" beekeeper. About the middle of May he goes out, tramps down the grass around the hive and puts on a super. On a frosty evening the latter part of September he tramps down the goldenrod around the hive, takes off the super, carries it to the back porch, sets it on edge and the next morning shakes off the frozen bees and stores the winter's supply of honey.

Several years ago the bottom board and cover rotted away, so to replace them he cut a piece of corrugated sheet iron in half, using one piece for the bottom, the other for the top. The bottom piece was placed on four up-ended concrete blocks, the hive placed on and the other piece placed on top, held down by two concrete blocks: — that was it. This made entrances on both ends of both bottom and top; wind blows through it, you can see through from either end but the bees must like it.

This brings me to the point I had in mind when I started writing.

Wintering Bees

When it comes to wintering, are bees the creampuffs we frequently give them credit of being? If left to their own device, would they do better than we do for them? My bees are wintered in good two full depth bodies, plenty of stores, an upper entrance, bottom entrance restricted, a good windbreak, and I have winter losses.

His, about 50 yards away, out in the open, 16 inches off the ground; corrugated iron for both bottom and top, the wind blows through from any angle, a one story hive, and the bees are raring to go every spring. Why?

Keep Gleanings Coming
By Renewing Your Subscription Now

Texas Caucasian Queens
1-24 ... $1.45 25-99 ... $1.35
100 up $1.25
Live arrival and Health Certificate guaranteed
KANES APIARIES
Ph. SW 8-3039 Hallettsville, Texas

QUEENS THAT SATISFY
From improved yellow banded Hybrid strain. Marked and clipped unless otherwise specified. Shipped Air Mail for quicker delivery.
1 to 24, $1.10 25 up, $1.00
No packages please.
S. C. SQUIRES
P.O. Box 566 Chapel Hill, N. C.

THREE BAND ITALIAN "QUEENS"
Never before have good queens been so important.
Serving those who demand the best.
— Prices —

1-9	10-49	50 up
$1.00	90¢	80¢

Caged fresh from our yards and rushed to you prepaid Air Mail.
Clip and mark, 10c extra.
Quality Does Not Cost — It Pays
THE WILBANKS APIARIES **CLAXTON, GEORGIA**

THE BEEKEEPERS' ASSOCIATION

(Continued from page 461)

Perhaps, but it is a rare state indeed where beekeeping laws cannot be simplified or re-written in clearer language.

There are some areas of interest where an association's main aim may well be to bring subjects up for discussion, rather than to attempt actual regulation. Honey prices, pollination contracts, obtaining locations and disease control may well bring some heated discussions but I feel that these subjects should be given a good airing and not hidden under the table. Actual control by an association may be possible only in states where control is the only cure for a bad situation.

What Kind of Programs Interest Beekeepers?

That is the million dollar question that plagues every association official. Interested in science myself, I found out that a good sound scientific speech on some phase of bee life might well put everyone to sleep simply because they could not apply it to every day bee management.

But in every state and location there is usually some beekeeping topic that is of special interest at some time. Get a good speaker on spring management, requeening or wintering, and according to the time of year, you will hold the interest of at least part of your membership.

What is the most interesting feature of Vermont association meetings? I have often felt that it was the half hour after the noon lunch when beekeepers gather in small groups and exchange information on the year's work. That basically is the value of the bee association meeting, to bring beekeepers together for a free exchange of ideas and experiences. Sometimes bee meetings are a bit tiresome, occasionally they are even horrible, but mostly they are good and certainly they are an important part of the beekeeping industry.

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Many of our thousands of readers wish they knew how to buy from you. The most inexpensive way to let them know is to advertise in Gleanings. For over 85 years Gleanings has been taking the work out of selling.

Be sure your "selling story" is in the next issue. Send for an advertiser's rate card today.

Gleanings in Bee Culture
Medina, Ohio

NEWS AND EVENTS

(Continued from page 498)

OHIO

Lorain County Beekeepers' Field Day
Wellington, Ohio

The Lorain County Beekeepers' Annual Field Day was held at the Fairgrounds in Wellington, Ohio, Sunday, June 25, 1961. In spite of the fact that the weather was cold enough for topcoats the attendance exceeded 100.

Following a family picnic lunch at 1 p.m., Lester Breckenridge, President of Lorain Beekeepers' Association, extended a word of welcome. Harry J. Vandenberg, Master of Ceremonies, introduced the guests.

Alvin Roser was in charge of a bee smoker lighting contest. The volume of smoke produced was so great that there seemed to be danger of the fire department truck appearing on the scene.

S. E. Bailey, State Bee Inspector, gave a splendid talk on Basic Beekeeping, in which he emphasized the requirements for securing the maximum crop of honey and wax, viz. good bees, good equipment, intelligent apiary management and a good honey flow.

Members of the 4-H Club demonstrated methods of feeding bees, assembling hive parts and installing package bees.

A question and answer panel "Stump the Experts" was moderated by the County Extension Agent, Paul C. Leidheiser. Some of the experts were almost stumped.

We were pleasantly surprised to have guests drop in — Mr. C. D. Floyd and family. Mr. Floyd is a bee inspector for Minnesota, also chairman of the Marketing Committee of The American Beekeeping Federation. Mr. Floyd gave a very enlightening talk on honey marketing in which he mentioned the urgent need for organization among beekeepers. Honey must be sold at a profit so that beekeepers can remain in business.

MASSACHUSETTS

Middlesex Co. Beekeepers' Association
Westford, Massachusetts
August 26, 1961

The Middlesex County Beekeepers' Association will meet at the home of Mr. and Mrs. Charles Helmboldt and "Pop" Adams on Saturday, August 26, at 2:00 p.m. This is a favorite spot for our meetings for while fathers and uncles inspect hives, children ride in the tractor trailer, and wives enjoy the lovely garden. After the meeting everyone is invited to see the 4-H Fair in the same town.

Beekeepers may be interested to have the new address of our president, Mr. John Furber, who has moved to 70 Plainfield Avenue, Newton, New Jersey. Mr. Alfred Olsen of Lowell Rd., Concord, Massachusetts as vice president takes over the duties of Mr. Furber. Good luck to John and Mildred in their new location! — B. Carlson, Corres. Sec.

KANSAS

Northeastern Beekeepers' Association
Kansas City, Kansas
September 3, 1961

The Northeastern Kansas Beekeepers' Association will meet September 3, at 2:30 p.m. for the regular meeting at the home of Mr. and Mrs. Nick Rodina, 2726 North 38th, Kansas City, Kansas. Mr. Connie Miller, Kansas City, Kansas will speak on the topic, "The Law of the Honeybee". Everyone is welcome. Refreshments will be served. —Mrs. Bert M. Parrish, Sec.

CHAS. A. REESE RETIRES

Chas. A. Reese, Extension Specialist in Beekeeping for Ohio, retired July 31, after 14 years of extension work. Prior to his appointment on the Extension Staff, Mr. Reese served 23 years as State Apiarist in the Ohio Department of Agriculture. He also did bee inspection work in Florida before he worked in Ohio.

Mr. Reese has made a worth-while contribution to our beekeeping industry and will be missed. Our best wishes go with you, Charlie.

OBITUARIES

(Continued from page 499)

FRED GOULD

FRED GOULD, Angola, Indiana, aged 60, died recently following several years' illness. Aside from producing honey, he was engaged in the fish bait business. He is survived by a wife, three sons, two daughters, eight grandchildren, one brother and two sisters.

GOOD FOR NIBBLING

(Continued from page 485)

mixture and mix well. Fold in coconut and bran flakes. Pour into waxed paper-lined and greased 8x8-inch pan. Bake in moderate oven, 350°F., 30 minutes. Remove from pan. Cool. Cut in squares. Yield: 16 squares, 2x2.

Honey Scotch Cookies

One-fourth cup sugar, ¼ cup honey, ¼ cup brown sugar, ⅓ cup shortening, part butter, 1 egg, 1 teaspoon vanilla, 1 cup, plus 2 tablespoons flour, ½ teaspoon salt and ½ teaspoon soda.

Cream sugars, honey, shortening, unbeaten egg and vanilla until light and fluffy, using medium speed on electric beater. Sift flour with salt and soda. Reduce to slow beating and add dry mixture gradually, mixing thoroughly. Chill dough. Drop rounding teaspoons of dough on greased cookie sheets. Bake 15 to 17 minutes in moderate oven 350°F.

BEEKEEPING IN THE CLASSROOM

(Continued from page 460)

and use spare time to assemble and paint more hive bodies. Those graduating are replaced by other boys just starting vocational agriculture.

The boys in the Association have put on some interesting demonstrations for the Lion's Club and for the Young Farmers of America. These organizations have had high praise for the interesting demonstrations in bee equipment and the boys' discussions.

"Stings are no particular problem to the boys, although they do cause them some temporary discomfort," explains Barfield. "Only one boy has quit because of stings, but another bought his stock immediately and is making good progress."

Nor do the bees in town bother the neghbors. One of the boys smoothed over a situation in good fashion when an irate mother complained that her son had been stung by one of his bees. The young beekeeper answered with timid politeness, "I'm very sorry, and if you'll show me the bee that stung your son, I certainly will punish it."

A NEW LABEL ADHESIVE

Not affected by greasy can coatings. Holds all surfaces, including many plastics. Dries quickly to a transparent, weather and mineral oil resistant film. For brush or semi-automatic. Sample and prices from

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151 Webb Street Dept. AC-1
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Beeswax Rendering Service
Exchange Your Beeswax for Foundation
Write for Price List.
WAX WORKERS, INC.
1330 Slaterville Rd. Ithaca, N. Y.

CALIF. CAUCASIAN QUEENS
1 to 24, $1.50 25 to 99, $1.25
100 up, $1.00
DON J. STRACHAN
2522 TIERRA BUENA RD.
YUBA CITY, CALIF.

HARPER'S
FAMOUS HIGH QUALITY
ITALIAN QUEENS
By Air Mail after June 10th
85¢ each
10 for $8.00 100 for $75.00
We will be happy to supply your needs.
CARLUS T. HARPER
New Brockton, Ala.

PACKAGE BEES & QUEENS
and ROYAL JELLY
Write for Prices
JACKSON APIARIES
P. O. Box 265 Funston, Ga.

SUMMER PRICE
IT PAYS TO BUY McVAY'S
QUEENS of QUALITY
at $1.00 each, any number
J. F. McVAY
Jackson, Ala.

When you think of
QUEENS

Think of:
Merrill Bee Co.
P. O. Box 115
State Line, Miss.

Our 100% satisfaction has been good for 49 years, let us prove it.
Untested queens . . . .75¢ each 50 up . . . .65¢
Tested queens, ... $1.50 any number

BETTER BRED QUEENS
THREE BANDED ITALIANS
Your best buy is our **"Better Bred Queen"**. Highly bred for gentleness, non-swarming, honey gathering, and the price is right.
70¢ each the remainder of the season.
CALVERT APIARIES Phone Valley 9-6183 CALVERT, ALA.

PACKAGE BEES AND QUEENS
Walker-Lee Co. Live Oak, Calif.

Shoot for profit - - - - Shoot for the STAR
Order STARLINE queens this season and profit.
STARLINE: 1-24, $1.20 25-99, $1.15 100-up, $1.05
ITALIAN: 1-24, .90 25-99, .85 100-up, .75
Clipping 5¢ each, marking 5¢ each.
Reg. U. S. Pat. Off.
GARON BEE CO. DONALDSONVILLE, LA.

HOWARD WEAVER & SONS PERSONALLY REARED CAUCASIAN QUEENS
Choice of many: for Honey, Gentleness, Wintering
1 to 24 . . . . . $1.00
25 to 99 90
100 & up 85
For Dadant Midnite Hybrid Queens, add 25¢ to the above prices. Queens clipped and marked at 10¢ each. State health certificate with each shipment. Live arrival guaranteed.
HOWARD WEAVER & SONS - - - - - NAVASOTA, TEXAS

MONTHLY HONEY REPORT

(Continued from page 455)

lean. This is not an unusual condition in the northern states where bees have to really get-up-and-go from a long winter, via a short spring, in time to get a crop from a three week clover flow. And once again, as usual, under these conditions it takes good beekeeping to control swarming. As Floyd Markham of Michigan says, "If we can keep the bees in the hives with no swarming, the season looks good".

THE HONEYBEE ACT

(Continued from page 494)

poses without importing adult bees. A successful method of preserving and shipping drone semen has been developed.[1/] New breeding stocks can be introduced by importing drone semen and making three or more backcrosses to domestic stock by artificial insemination. Preliminary studies on procedures for handling eggs, larvae, and pupae suggest the possibility that they can be transported safely and by relatively simple methods.

1/ Taber, S. and M. S. Blum. Artificial Preservation of Bee Semen. Science 131 (3415): 1734-1735. June 1960.

NORMAN'S QUEENS
Improved 3-Banded Italians
65¢ Air Mail
Requeen with nice young dependable queens. Safe arrival guaranteed with health certificate.
Tested queens $1.50
2-lb. pkg. w/q 3.00
3-lb. pkg. w/q 4.00
4-lb. pkg. w/q 5.00
All queens postpaid, packages F.O.B.
NORMAN BEE CO.
Route 1 Phone: JO 2-6412 Ramer Ala.

QUALITY BRED QUEENS
"CAUCASIANS"
Breeders furnished by J. E. Hastings. Bred for honey production, hardiness and gentleness.
1-24 ..... $1.10 each
24-99 ..... 1.00 each
99 & Up ..... .90 each
Italian queens, 75¢ each
or $65.00 per hundred.
All queens shipped Air Mail.
WALTER D. LEVERETTE APIARIES
P.O. Box 374 Dallas, Ga.

CAUCASIAN QUEENS
1 and up ..... 65¢
Clipped and Marked at no extra cost.
L. B. HUMPHREY
Reidsville, Georgia

VIGOROUS BEAUTIES
Bred to get the honey.
Italian queens $1.00
W. E. PLANT
Rt. 2 Hattiesburg, Miss.

Caucasian Queens
75¢
Top Quality
Postpaid Air Mail
Live Arrival Guaranteed
write or call
POrter 7-3960
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LEATHER ITALIAN QUEENS
Via Air Mail Prompt Shipment
1-25 ..... $ .85 each
26 up ..... .75 each
Improved
Select Tested ... 3.00 each
Inquire about delivery date before ordering this stock.
Approved Breeders $5.00 each
O. K. Anderson & Son
Box 66
Coffee Springs, Ala. U.S.A.

BROTHER ADAM

(Continued from page 470)

Production of the Anatolians therefore averaged 127.76 percent net, or 151 percent gross including stores, over and above the general average per colony over the two years.

Commenting on the results, Brother Adam observed: "This performance is truly staggering, and it is still more so if we consider it represents the performance not of any nondescript bees, but that of high producing stock and selected crosses of proved outstanding honey gathering ability. We do not yet know, and it is anybody's guess, what the comparative results will be in a really good season."

In summing up the purpose behind his world-wide quest, Brother Adam observes: "The task for the progressive beekeeper is to select, assemble and test different races of bees which possess the highest potential value for breeding, and then, by means of crossbreeding, combine the best qualities in new types. That, and none other, is the aim of the work I have been doing."

To which one may add: "And doing with outstanding ability."

HYBRID QUEENS

are necessary to show the extra pounds of honey for beekeeping profit. **MIDNITE HYBRIDS** give you the extra good wintering colonies plus the ability to store honey in beautiful white capped combs. If wintering is your problem plan now to incorporate **MIDNITE HYBRIDS** in your own testing program.

STARLINE HYBRIDS, the oldest commercially successful hybrid available brings you the vigor of a hybrid strain in the Italian race. COMPLETELY NEW this season, this STARLINE has been tested for five seasons bringing you the finest strain of bees available. If you have not used the **NEW STARLINE,** requeen out all of your poorer queens and try them for your next honey crop.

ALL HYBRID queens are reared under constant, stimulant feeding to insure large, well-developed queens to head populous colonies. Plan on using these queens in all your normal work. RETURN MAIL shipments throughout summer and early fall.

Quantity	1 to 25	26-99	100 up
STARLINE or MIDNITE	$1.30	$1.20	$1.00
Italian	1.00	.90	.80

Clipped and marked by experienced handlers for only 15¢ each additional.

YORK BEE COMPANY
BOX 300 JESUP, GEORGIA

DADANT'S STARLINE HYBRID

The strains preferred by leading Honey Producers.

DADANT'S MIDNITE HYBRID

Write us for further descriptive folders on the Midnite and Starline hybrids.

HOMAN'S

QUALITY BRED
CAUCASIANS

1-24 ..... 85¢
25 & up ..... 75¢

All Queens Postpaid Air Mail.
Health Certificate
and Live Arrival Guaranteed.

HOLDER HOMAN
Shannon, Miss.
Phone PO 7-3880

ITALIAN
Package Bees
and
Queens
JOHN S. SHACKELFORD
Rio Oso, California
Phone: Wheatland, Calif. NEptune 3-2392

RICH MOUNTAIN APIARIES
COSBY, TENNESSEE
Will this year offer the famous "LITTLE" strain of Italian queens.
Have been wholesaling to Little Apiaries for the past several years.
QUEENS 1 to 24 ..... $1.20
25 to 50 ..... 1.10
Discount on large orders. Queens marked and clipped FREE when requested.

QUEENS
Italians Caucasians
Nice large queens .... 75¢ each
To air mail queens add 5¢ each extra.
To clip and paint queens add 10¢ each queen.
Tested queens $3.00
Select tested queens 7.00
All queens are personally reared.
Your order appreciated.
Order 1 or 1,000.
MITCHELL'S APIARIES
Bunkie, La.

ITALIAN....."GULF BREEZE"....QUEENS

The old reliable company offers you good queens for any use and in any quantity.

Prices: 1-9..95¢ each 10-49..90¢ each 50 up..80¢ each

Mark 5¢ and clip 5¢ each extra.

BESSONET BEE COMPANY Donaldsonville, La.

Queens IMPROVED 3-BANDED ITALIANS **75¢** Via Return Air Mail 25 up, 65¢

Requeen with young vigorous dependable queens. Safe arrival, health certificate satisfaction in U.S.A. and Canada.

2-lb. pkg. with queen $3.00
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